Solvay Today 2020



# Progress beyond



### At Solvay...

We are more than scientists and engineers in labs; we are all around you. You'll find us in the small details of everyday life – that's where we really come into our own. Because for Solvay it's the unknown, unseen and invisible that makes us who we are. And through our customers, our elements touch lives. From the car you drive every day, to your holiday. A phone call to a loved one or a safe car-ride home – we make it happen. We keep your family warm and provide them with clear air and water. We ensure that nutrient rich soil and long lasting crops can feed a growing population. We're consistently present in the small acts of daily life enabling people to do things like washing their hair and caring for their homes, ensuring we're all safe, clean and healthy. We provide doctors and nurses with the tools they need to save peoples' lives. At Solvay there are countless ways we facilitate the significant, small and even the miraculous moments of human life.

2019 Key Figures

24,100 Employees



Countries

€**10.2** bn

Vet sales

115

Industrial site

21 Major Research and Innovation centers

#### Our Businesses

#### Materials 35% of Group EBITDA

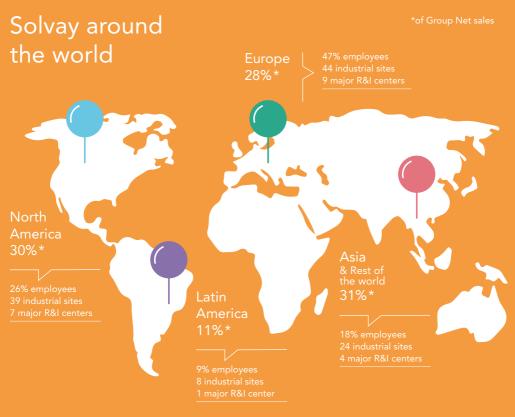
Our unique portfolio of highperformance polymers and composite technologies is primarily used in sustainable mobility applications to reduce weight, improving CO<sub>2</sub> efficiency. Our materials also serve Healthcare and Electronics.

#### **Chemicals** 38% of Group EBITDA

Our businesses are world-leaders in essential chemicals to daily life. These chemical intermediates are used in a broad range of applications, serving end-markets like Food, Healthcare, Personal & Home care, Environment, Building and Industry.

#### **Solutions** 27% of Group EBITDA

Thanks to our unique formulation and application expertise, we provide customized specialty formulations that minimize environmental impact, serving end-markets like Agro, Food, Consumer goods, Mining and Electronics.



#### Our Markets

Our core technologies, skills and expertise have allowed us to build robust positions on fast-growing markets, where we hold a number one or two position.



Aerospace

althcare Co

Consumer A Goods iculture Automo Food Industrial Environ applications ient Mining

ing Electi

Electronics

### **ReInventing Solvay**

Ilham Kadri's arrival as Solvay's CEO brought a new impulse to the Group's transformation in order to unleash its full potential. She started by listening to employees, investors and customers around the world, and their insights provided the foundation of our Purpose and Vision and of a complete strategic review. These major steps are making us even stronger to navigate through the heightened uncertainty in today's times.

### Bonding people, ideas and elements to reinvent progress

To define the Group's purpose, the largest listening exercise in Solvay's history was conducted. Over 13,000 colleagues replied to an in-depth survey; more than 3,000 people took part in extensive listening Solvay already had a Purpose that gives meaning to our individual and collective efforts on a daily basis: We bond people, ideas and elements to reinvent progress. Bonding has always been a fundamental element of the Solvay spirit since its creation in 1863, as the company connected the best scientists of its time. To this day, we bond elements into molecules that become our products, we bond among employees and with our stakeholders, connecting people and

#### G.R.O.W. together

Building on our strong legacy of science, sustainability and innovation, we defined our new G.R.O.W. strategy. Our three business segments are aligned with strong megatrends, while a common operating model helps us work more effectively and efficiently together – always focusing on our customers' needs and creating sustainable shared value for all.

### New sustainability goals focused on climate, resources and quality of life

As part of our strategy, we defined a program – Solvay One Planet – with ten new measurable sustainability objectives to positively shape our impact in three areas: *climate*, i.e. aligning our emissions with the Paris agreement trajectory and stopping all future investments in coalpowered energy plants; *resources* and *quality of life* – where we are raising the bar as well.

### 24,100 Solvay people bonding to support customers and communities

Today's pandemic represents unprecedented challenges for us all. As a chemical and materials company, we are an essential partner in our customers' supply chains and many of our products serve applications that are critical to healthcare, food, hygiene or other aspects of daily life. We quickly adapted in order to deliver.

Our more than 24,000 colleagues around the world do their utmost to support our customers and communities – both during these unprecedented circumstances and in the future. This is how we make our Purpose a reality. This is *Progress beyond*.



#### A Purpose-led culture

Together with our Purpose, we defined our Core Beliefs: Purposeful responsibility; Unity, not uniformity; Passion for performance. These values express the soul of Solvay and what we believe in. They have driven us over the past 157 years and will keep driving us in the future. Rooted in these values, our new People Engagement Model is based on a set of behaviors which will build the culture to pursue our Purpose.

"Our new People Engagement Model will build stronger bonds with our people, so they enjoy a great employee experience throughout their career, empowered to bring their whole self to work. They are at the heart of achieving our G.R.O.W. strategy and making our Purpose a living reality."

Hervé Tiberghien Member of the Executive Committee, Chief People Officer

"Thanks to the resilience, creativity and agility of Solvay colleagues, we are able to contribute in a significant way to protecting the lives of healthcare workers, and have again risen to the challenge to help society in its time of need. The closer you look, the more essential we are."

> Ilham Kadri Chief Executive Officer

# How we are bonding with communities to help fight COVID-19

Today's COVID-19 pandemic is placing unprecedented challenges on us all – as companies, as citizens, as parents, as friends. At Solvay, our Purpose invites us to bond people, ideas and elements to reinvent progress, and our current reality calls us to do precisely that, now more than ever. Solvay maintains its commitment to protecting the health of its employees and communities, and the safety and security of its workplaces, while continuing to serve its customers, especially in critical areas in light of the coronavirus pandemic.

### Actions and contributions

Across our various businesses around the globe, we have been able to provide critical supplies to those in need, such as hydrogen peroxide (H202), hand sanitizer, face shields and other protective equipment. We have also contributed to various relief efforts, including partnerships with community organizations and nonprofit groups. For example, we have made considerable donations of hydrogen peroxide for disinfection and sanitization to governments and local authorities in highly affected countries such as China, USA, Italy, France, Spain and Belgium. Many of our products are crucial to our customer's supply chains and serve critical applications in our daily lives. That's why several of Solvay's business units have put in place emergency product offerings to customers that serve healthcare and other sectors with critical needs as a result of the coronavirus pandemic.



"Solvay has been extremely responsive and reactive in answering our call for hydroalcoholic solution when we were in desperate need. We could sense that they were willing to help out of pure solidarity."

> **Philippe Leroy** CEO of University Hospital Saint Pierre, Brussels, Belgium



# 60,000

"Solvay offered us the possibility to use a high performing personal care ingredient while having a great social responsibility impact."

> Dr. Elisabeth Poppe Corporate Director, Henkel Beauty Care and R&D Hair Care



# Environmentally AND socially responsible personal care

Consumer demand for healthier and more eco-friendly personal care products is on the rise, and the COVID-19 global pandemic is only reinforcing it. To meet this trend, Solvay has developed a series of bio-sourced polymers that offer manufacturers a full range of conditioning and texturizing features. One of these is Jaguar<sup>®</sup>, a smoothing agent derived from guar, a legume cultivated in Northern India from which is obtained a natural thickener. Solvay is the global leader in the chemical modification of guar. In personal care, these polymers help manufacturers improve various formulations, from shampoo that facilitates detangling to body cleansing products that tighten and irritate the skin less.

Solvay launched the Sustainable Guar Initiative, in partnership with its customers L'Oreal and Henkel, and the NGO Technoserve, aimed at encouraging sustainable guar cultivation practices in Bikaner, India to help increase farmers' revenues and empower women. Thanks to this initiative, Solvay helped Henkel develop a range of natureconscious products that also promote social responsibility. This is part of our commitment to developing bio-based ingredients for many different sectors, from the food industry to cleaning products to agriculture.

# Solutions to support the healthcare industry, now more than ever

At a time when the global healthcare community is being challenged to increase the supply of life-saving devices at an unprecedented rate, our Group is proud to provide a range of products that can represent a significant contribution to these efforts, primarily medical-grade specialty polymers with a proven record in numerous healthcare applications.

## All the right tools in our portfolio

As the industry leader in specialty polymers, we have been supplying the healthcare industry for decades with high performance plastics and other materials. Today, these tried and tested products are available for the emergency production of medical and personal protection equipment for which demand has never been so acute.

Our medical-grade polymers such as Radel® PPSU are used to replace metal in healthcare applications like reusable surgical instruments. In the current context, these biocompatible polymers are used to produce transparent, sterilizable components, such as connectors, vessels and chambers, that are suitable for patient contact. Transparent sheet made from these materials is being used to make reusable intubation chambers that can be disinfected and sterilized.

Other materials in the Group's portfolio such as films, melt spinnable materials and nanofibers are being used for crucial elements to fight the pandemic: filtration devices and personal protection equipment. Among these, we provide materials to make non-woven fiber for surgical and respiratory masks, thus easing supply shortage. To do this, we rely on our experience in membranes filtration technology as Solvay supplies PVDF and sulfone polymers for hemodialysis membranes having excellent biocompatibility.

As the world's largest hydrogen peroxide producer, Solvay also plays a key role in compensating for the shortage of sorely needed surface and confined environment disinfectants. We are also supplying chemical components for antiviral drugs as well as diagnostic formulations used to test patients for COVID-19.

In addition to products and materials, our Group has technical and market expertise to offer in this time of crisis. Our extensive network can help with rapid prototyping for injection molding and 3D printing of ventilator parts. "I have never been more passionate in my career because I work for a company that has the knowledge, materials, and means to make a difference in the COVID-19 crisis. What we do today may help my parents who may not get allocated a ventilator, my sister who is an ER doctor, my colleagues that have fallen ill, and essentially the entire population on our planet."

V Jeffrey Hrivnak Healthcare global business development manager, Specialty Polymers Global Business Unit



# Working fast and working together

In the face of an unprecedented global situation, Solvay has engaged with customers for emergency production, by assisting with material selection, manufacturing, testing and regulatory certifications. "I am proud to see the world come together and redesign in two days parts that would normally take two years," says Jeffrey Hvrinak, healthcare global business development manager at Solvay Specialty Polymers.

An example of such high-speed collaboration can be found in Solvay's work with Boeing to supply highperformance, transparent film for the production of face shields for medical professionals. Boeing approached Solvay for its experience in advanced composite and adhesive materials; mere days later, this thermoplastic film that can be sterilized and withstand aggressive disinfectants was approved to produce thousands of face shields critically for medical workers in the U.S..

Solvay is proud to support the healthcare industry with its technical, regulatory and supply chain expertise, thereby applying its 157 years of commitment to putting science at the service of humanity.



"At Solvay, we are committed to supporting the switch to natural ingredients. By doubling the production capacity of Rhovanil® Natural CW and aligning our production process with the National Organic Program requirements in the US, we are responding to our customers' long-term growth needs."

> Peter Browning President, Aroma Performance Global Business Unit

# Making natural vanillin available to all

The food industry today is looking to exhibit simpler and additive-free ingredient lists that can satisfy consumer thirst for natural products. Switching to natural instead of artificial vanillin is a key advantage in that race.

Solvay produces a type of vanillin recognized as natural even by the most stringent regulations: Rhovanil® Natural CW, obtained through the fermentation of a raw material that is natural itself, rice bran oil. Vanillin is omnipresent in baked goods, chocolate and confectionery, but is also in personal care, flavors & fragrances and cleaning products. Whatever the use, manufacturers, thanks to Solvay's Rhovanil® Natural CW, can switch to natural vanillin without any reformulation, and demand is constantly rising. Solvay runs manufacturing plants in Europe, China and the USA, complemented by Vanil'Expert Centers, multidisciplinary facilities that can accompany customers in their developments.

### Innovative materials for more sustainable mobility

In order to decrease greenhouse gas emissions, the aerospace and automotive industries have two main paths to follow: electrification and lightweighting. In both areas, Solvay provides innovative solutions to help make transportation cleaner, safer and more energy efficient.



~50%

Electric or hybrid vehicles in global automotive production by 2030

### -20 to -30%

In manufacturing costs using thermoplastic composites

## Better batteries to accelerate electric mobility

To power the ever-increasing number of electric and hybrid cars on the roads, innovative technologies are needed for batteries that charge faster, last longer and deliver more energy while costing less. Solvay is a leader in solutions for next generation batteries thanks to its portfolio of high performance materials, lithium salts and fluorinated products – such as Solef® PVDF, a thermoplastic that improves the performance of lithium-ion batteries. Solvay is also a key player in setting up an ecosystem for battery recycling.

#### Lighter vehicles for lower emissions

For lighter cars and planes with lower emissions, advanced materials are the best alternative to metal and solid plastic structures. Solvay has a unique portfolio of composite materials, specialty polymers, adhesives and coatings to help manufacturers meet their emission reduction challenges. Our most innovative composite materials are up to 40% lighter than metal, but they also cure much faster than traditional composites, enabling quicker, more efficient and more cost-effective production. On top of lightweighting, their benefits include better aerodynamics, design freedom and corrosion resistance.

# Bonding together for the planet

Bonding people is at the core of Solvay's Purpose. Citizen Day 2019 was a unique occasion to bring together the 24,100 people that make up the Group around the world and direct their energy toward one shared goal: serving society and the planet.

# Rallying for the environment

Last September, Solvay organized its first Citizen Day, an event designed to encourage all its teams to take action and serve their communities. Inspired by the UN Climate Action Summit, the theme of this first edition was the preservation of the environment.

Teams of Solvay employees volunteered to take part in environmental projects with charities, administrations and NGOs. "Such concerted yet diverse actions raise awareness about how we can – as individuals, as teams, as a company – care for the planet we all share. Together, we have 24,100 opportunities to make a difference," said Solvay CEO Ilham Kadri.

# An inspiring diversity of initiatives

In China, Bulgaria, the USA, France, Thailand, Brazil, Belgium, Mexico, the UK and Canada, among others, Solvay sites put together initiatives that were as diverse as our teams: cleaning, planting, visiting schools or encouraging the switch to eco-friendly behaviors.

Awards honored the initiatives with the strongest impact. In the end, two teams with equally impressive initiatives were declared winners: Zhenjiang (China) and Alpharetta (USA).



Carolina Brigagao Senior Lawyer, Solvay Brazil, and Citizen Day Jury Member



94%

Solvay employees 168

ites accross the world

### **Fast Facts**



# Speeding up the development of innovative materials for lighter planes

Solvay opened two innovation centers dedicated to thermoplastic composites in the US and Europe to speed up the development of these materials that make aircraft more fuel-efficient.



We bond people, ideas and elements to reinvent progress. The most important listening exercise in Solvay's history, involving 13,000 employees, investors and customers, helped us uncover our Purpose. It expresses the sense of connection, collaboration, innovation and progress inherited from our founder Ernest Solvay more than 150 years ago, and embodies our Vision to create shared, sustainable value for all.

## Carolyn Bertozzi, Chemistry for the Future Solvay Prize

Professor Carolyn Bertozzi of Stanford University won Solvay's 2020 Chemistry for the Future Prize for her invention of bioorthogonal chemical reactions performed in living cells. This innovation will ultimately help diagnose and treat certain cancers and infectious diseases.



# Ten goals focused on climate, resources and better life

As an integral part of our G.R.O.W. strategy, we are stepping up our commitment to sustainability with our new 2030 program, Solvay One Planet. Aligned with our Purpose and inspired by the United Nations Sustainable Development Goals, it comprises ten measurable objectives that will help us improve our impact on climate, resources and better life.





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### Seven products labeled as Efficient Solutions

In 2019, the World Alliance for Efficient Solutions created by the Solar Impulse Foundation recognized the value of seven Solvay products as sustainable solutions that provide proven environmental benefits while being profitable.

# Creation Solvay Solidarity Fund against COVID-19

Applying its Purpose and sustainability commitments, Solvay has launched a solidarity fund to provide additional financial and non-financial support to any employee and dependents who may experience hardship due to the impact of the coronavirus pandemic. The fund is administered by the King Baudouin Foundation, and financed by voluntary contributions from Solvay's senior executives and employees, matched by the Group, and topped up by contributions from shareholders. "I'm just doing my job, though the current situation encourages us to push further and to position ourselves not in the center of everything, but as links in a chain. A chain that's working for the common good."



Xavier Tribert Nurse, Special Chem Global Business Unit, Salindres, France



**Progress beyond** 

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