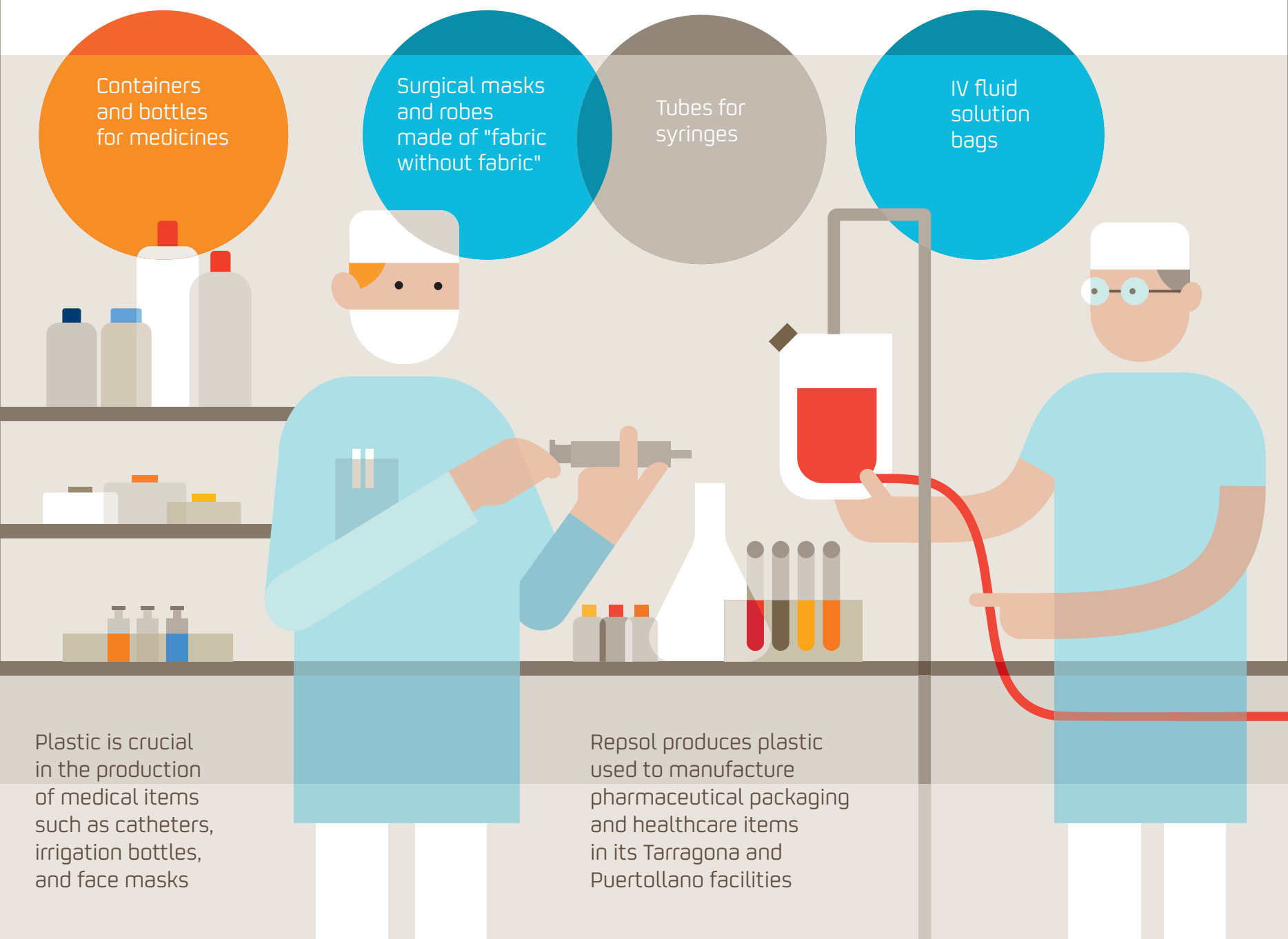


## Plastics at work for our health



Specialized products will be a key component in the future of the petrochemicals industry. Repsol is committed to creating value through its products and to further internationalizing its business. The company's Chemicals business area, which ended 2016 with a 2.5% increase in sales, explores new markets such as the healthcare industry. It has launched a new line of plastic designed for use in masks, saline bags, and medicine containers.

The production of this line of polyolefins has required investment in the chemical plants of Tarragona and Puertollano to ensure "100% clean" processes that are required under industry regulations.

Cristina Martínez Acedo, Repsol's Pharma Product Manager, explains that with the company's Transformation Plan for its Chemicals business, it can break into a "growing and high-value market that we can access based on current competencies," such as the experience the company has in the production of food containers or extra-clean plastics for cables.

### 100% clean process

With more than 40 years of experience, Repsol is one of the leading European producers of polyolefins, the most widely consumed type of plastic made from hydrocarbons, which is known for its versatility. The company has now added a specialized line of this plastic that is used as raw material for manufacturers of pharmaceutical packaging and medical devices.

The facilities where it will be manufactured, the industrial complexes of Tarragona and Puertollano, have been adapted to "maximize cleanliness and diminish the possibility of cross-contamination from one material or product to another," Martínez continues.

It was also necessary to establish new protocols and operations "that align us with the industry's best practices to provide comprehensive tracking of products," with strict control of the flow of people and raw materials.

In order to comply with the Good Manufacturing Process Guidelines for Medical Products set by the Spanish government and the European Union, the company had to go through a validation process that involved seeking assistance from an external consultant. The biggest challenge was "applying these new processes at all levels of the production and distribution chain, which implies a cultural change."



## Repsol HealthCare

the brand name of the company's "pharma" line, is on the market in Europe, Israel, Turkey, Maghreb countries, and South Africa

### Plastic that improves health products

The new line includes 28 grades of polypropylene, polyethylene, and ethylene-vinyl acetate (EVA), variants of polyolefins with very different uses in the world of healthcare. Polypropylene is used to make products like syringes and inhalers; polyethylene is used to make containers and bottles for medicines; and EVA is used to create bags for saline solution or blood, thanks to its strength and durability at low temperatures.

Plastic has many properties that allow it to offer better performance compared to other materials traditionally used in the medical field. It is light-weight, durable and transparent. For example, polyethylene fiber is used to manufacture masks and surgical gowns using the "fabric without fabric" technique, in which fibers are held together by mechanical or chemical means and therefore don't shed, making it more hygienic than alternatives such as cotton.

### Differentiation strategy

Repsol HealthCare—the company's brand name given to its line of pharmaceutical packaging and medical devices—is now being marketed both directly and through agreements with specialized distributors in Europe, Turkey, Israel, Maghreb countries, and South Africa. The current offering will be completed at the end of 2017 with the addition of new grades of high-density polyethylene (HDPE).

The supply of plastic for the healthcare industry is a market that, due to the requirements of quality and hygiene, "has high barriers to entry. There aren't many competitors, but they are precisely the leading plastic companies, so putting out this line of products means taking a step forward in the differentiation strategy outlined in our Transformation Plan," concludes Cristina Martínez.

### A successful business transformation

Repsol is a leader in the petrochemicals business in the Iberian Peninsula, where it manufactures products at three industrial facilities: Puertollano, Tarragona, and Sines (in Portugal). The company's sales are concentrated in Europe, where last year it sold 2,428 tons of petrochemical products, as along with 464 tons in the rest of the world. However, in 2016, sales in the international market grew by 9.1%, proof that its strategy to globalize this division of the company is working.

Repsol decided to create a Transformation Plan for its Chemicals Business in order to tackle the difficult crisis the European sector experienced leading to the closure of chemicals factories across the continent. Aided by a positive international environment, the business's 2016 profits surpassed those earned in 2015, which was already an all-time record for this division of Repsol, thanks to its commitment to cost reduction, efficiency, and diversification.

A key part of the strategy was investing in the modernization of the crackers at the company's industrial complexes, which are the heart of the chemical plants. One way this was achieved was by using gas—which is cheaper than liquid fuels—as a power supply, in an industry where energy and raw materials make up 75% of costs.

This process of transformation led Repsol to be recognized as the top petrochemical company last year by *Petroleum Economist*, the world's leading energy sector publication.

## PETROLEUM ECONOMIST

recognizes Repsol as the best petrochemical company of last year



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