SMART GOALS AND CONTINUOUS IMPROVEMENT FOR A RESILIENT SUSTAINABILITY STRATEGY

In this article, Dirk Borghs, Chief Executive Officer of Datwyler Healthcare Solutions, considers the obligation of the pharmaceutical sector to implement environmentally responsible practices, and discusses the steps Datwyler is taking in its efforts for sustainability.

Forecasts on the effects of climate change have prompted all industries, including the pharmaceutical sector, to implement more environmentally responsible practices. In doing so, in 2015, some of the biggest names in the pharmaceutical industry, including Patheon, Biogen, Johnson & Johnson, Genentech and Novartis, joined the American Business Act on Climate Pledge.[1] Just last year, the European Commission outlined a strategic approach to pharmaceuticals in the environment[2] which entails expanding environmental monitoring, improving environmental risk assessment, supporting greener manufacturing methods, and reducing, as well as better managing, waste.

Now, even as the industry remains focused on the development and production of viable covid-19 vaccines and treatments, drug manufacturers can continue to support sustainability initiatives by working with suppliers aligned with their commitments to build more eco-conscious supply chains.

Already, many are doing just that by taking into consideration the sustainability initiatives of their suppliers before engaging in projects. Others are taking even larger steps. For example, in March 2020, Pfizer announced the completion of a US$1.25 billion (£970 million) ten-year sustainability bond[3] that will mature April 1, 2030 – the first ever sustainability bond for Pfizer, or any biopharmaceutical company. Proceeds from the bond will help support patient access to Pfizer's medicines as well as support the company's robust sustainability efforts[4] aimed at significant reductions in greenhouse gas emissions, waste and water use.

In the area of parenteral drug packaging, there are some key considerations to make when specifying solutions, such as plungers for prefilled syringes, and stoppers and caps for vials. How these system-critical elastomer components are manufactured makes up part of the sustainability story for every drug manufacturer.

SMART RESOURCE MANAGEMENT FOR A RESILIENT SUSTAINABILITY STRATEGY

In July 2020, Datwyler announced its long-term target for carbon neutrality after successfully reducing consumption of electricity, fuels and water per revenue unit for three consecutive years. Last year marked several key strides in resource

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Figure 1: A modern trigeneration unit at Datwyler's plant in Italy reduces the company's CO_2 emissions by 900 tonnes per year.

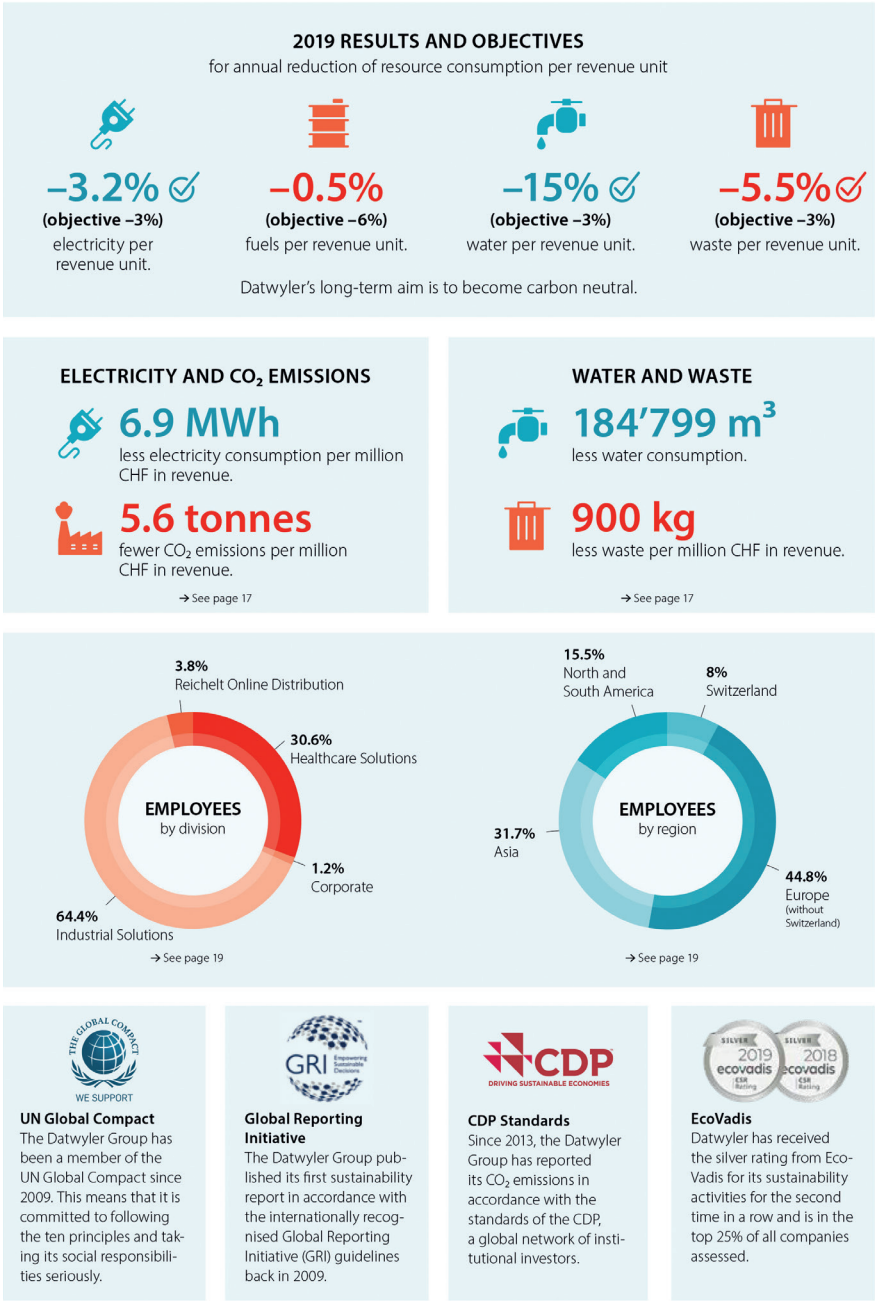

Figure 2: Datwyler's multifaceted approach to sustainability continuously reduces its carbon footprint.

management. The company reduced consumption per revenue unit for:

- electricity (-3.2%)
- fuels (-0.5%)
- water (-15.0%)
- waste volume (-5.5%).

Even though the company contends with the industry-wide challenges posed by covid-19, Datwyler is advancing its sustainability and climate strategy with the long-term goal of carbon neutrality. In Switzerland, Datwyler produces CO_2 neutrally by utilising a wood-fired heating plant for process energy and heating power, as well as using hydropower for electricity. As a result, every year the company saves 500,000 tonnes of fuel oil and 3,600 tonnes of CO_2. By implementing and operating a modern trigeneration unit at the Italian facility, Datwyler reduces the CO_2 emissions by some additional 900 tonnes per year (Figure 1).

These resource management changes help the company do its part in meeting the United Nations (UN) Sustainable Development Goals. The efforts also merited Datwyler with a top 25% ranking in the EcoVadis Corporate Social Responsibility (CSR) audit. As a company that continues to balance sustainability goals with the demands of designing and producing system-critical elastomer components for the primary packaging of parenteral drugs – meeting the highest standards for inertness, particle contamination prevention and compatibility with highly-sensitive large molecule formulations – Datwyler continuously improves the ways in which it can help pharmaceutical customers build a more resilient, environmentally conscious supply chain (Figure 2).

Compliance with Credible Sustainability Standards and Goal Setting Organisations

Demonstrating alignment with initiatives such as the UN Global Compact, a voluntary initiative based on CEO commitments to implement universal sustainability principles and take steps to support UN goals, or the Global Reporting Initiative (GRI), an independent international organisation that has pioneered sustainability for more than 20 years, reaffirms Datwyler's commitment and drives continuous improvement. As early as 2008, Datwyler published an annual sustainability report in accordance with the GRI guidelines. Since 2009, the Swiss-based healthcare supplier has been

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a member of the UN Global Compact. The Carbon Disclosure Project is another example. The not-for-profit charity runs the global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts. EcoVadis is one of the world's leading companies for CSR audits. It has assessed 60,000 companies from 155 countries, awarding performance ratings based on audits by sustainability experts. In addition to assigning rankings, EcoVadis offers industry profiles to improve performance.

Outside of sustainability-driven organisations, specific certifications from the International Organization for Standardization (ISO), including 14001, 50001 and OHSAS 18001, also provide important benchmarks. ISO 14001 is the international standard specifying requirements for an effective environmental management system. ISO 50001 is a company level certification requiring the use of an energy management system. This standard calls for the company to develop an energy policy, establish goals for energy efficiency, utilise data to meet said goals, measure policy effectiveness and make continuous improvements to the policy. These, and other standards and organisations, make for a robust guiding force for developing or reconfiguring sustainability goals.

Incremental Goal Setting to Reduce Utility Usage and Waste

Over three consecutive years, Datwyler has achieved reductions in resource consumption across key areas. Electricity consumption declined by 6.9 MWh per million CHF (£850,000) in revenue and CO_2 emissions declined 5.6 tonnes per million CHF in revenue compared with the previous year. Additionally, water consumption declined by 184,799 m^3 compared with the previous year and waste declined by 900 kg per million CHF compared with the previous year. To achieve this progress, Datwyler set challenging but achievable targets based on average annual reduction in the relative consumption of resources per revenue unit up to 2020: fuel -6%; electricity -3%; water -3%; and volume of waste -3%.

Evaluation of Chemical Compliance Management

Manufacturing 30 billion components a year requires 56,000 tonnes of raw materials, including polymers, fillers, aluminium, curing agents and antioxidants. As such, Datwyler must meet a variety of chemical law requirements at its production locations around the world, as well as additional industry and customer-specific rules. Chemicals legislation and the EU REACH (EU Regulation 1907/2006) governs the registration, assessment and approval of chemical substances within the EU, setting the standard for compliance. However, proactive advancements in chemical compliance management help to keep companies ahead of the curve on best practices for raw materials sourcing, usage, handling and disposal. Ensuring transparency on all substances makes seamless, open communication between customers and suppliers easier, especially if previously unproblematic substances must be re-evaluated (even if they continue to meet regulatory standards). In an instance where a particular material or ingredient is no longer desirable, implementing new solutions sooner rather than later could minimise product waste in the long run. Other important considerations for effective raw material management include the forwarding of waste rubber material for safe reuse, and efforts to curb packaging waste or switch to recyclable, or even reusable, packaging materials (Figure 3).

Figure 3: Proactive chemical compliance management can elevate best practices for raw materials sourcing.

Investment in Green Electricity to Support Carbon Neutrality

In addition to reducing overall energy and utility consumption, employing carbon-neutral electricity makes hitting major sustainability goals a stronger possibility for larger companies with global operations. In addition to the steps taken toward carbon neutrality at Datwyler's Switzerland and Italy plants, the company adheres to a plan to purchase carbon-neutral electricity at all its plants worldwide (Figure 4).

THERE IS NO TIME LIKE THE PRESENT TO PLAN A BETTER FUTURE

When it comes to driving sustainability in the pharmaceutical industry, the road ahead will be long. Last year, a study published in the Journal of Cleaner Production,[5] claimed that in 2015, the pharmaceutical industry generated 55% more greenhouse gas emissions than the automotive industry. The paper, "Carbon footprint of the global pharmaceutical industry and relative impact of its major players", asserted that the sector would need to reduce emissions by 58.6% from 2015 levels by 2025 to comply with reduction targets in the Paris Agreement.

However, from parenteral packaging component manufacturers to drug companies, the industry is in this together. Even in the most challenging times, setting and acting on goals for sustainable initiatives

Figure 4: Datwyler's Switzerland facility has achieved carbon neutrality with wood-fired heating and hydropower since 2012.

"When it comes to driving sustainability in the pharmaceutical industry, the road ahead will be long. Last year, a study published in the Journal of Cleaner Production,[5] claimed that in 2015, the pharmaceutical industry generated 55% more greenhouse gas emissions than the automotive industry."

is a promise to do even better for the patients that rely on both the medications produced and live in the world where they are made. By constructively working together, drug companies and suppliers can develop more resilient, long-term strategies that contribute to worldwide sustainability goals and help combat climate change – even amid a pandemic.

Datwyler is prepared to make its contribution as a socially and environmentally responsible company. There is only one planet Earth and we have to take good care of it if we want to secure it for our children and future generations. Datwyler proudly looks back on more than 100 years of value creation for the benefit of all its stakeholders. Sustainability is deeply rooted in its heritage and values and has always been part of the DNA of the company. A total of 11 years of membership in the UN Global Compact and 12 GRI sustainability reports proves its commitment. Despite the pandemic, Datwyler is continuing its efforts. An interdisciplinary project group is working on further advancing its sustainability and climate strategy with the long-term target of becoming carbon neutral. Specific milestones will be communicated with the next sustainability report in spring 2021. Adhering to the "People, Planet, Profit" concept, Datwyler aims to live up to its social responsibility, offer an attractive and agile work environment and attract the best international talent. Aware that resources are limited, the company wants to use them responsibly and contribute to achieving the UN Sustainable Development Goals. And above all, Datwyler wants to continue to create value for its customers, grow profitably and lay the foundation for its long-term success.

ABOUT THE COMPANY

Datwyler engineers high-quality, system-critical elastomer components for applications in healthcare, mobility, oil and gas, and food and beverage. With more than 20 operating companies, sales in over 100 countries and some 6,500 employees, Datwyler generates annual sales of more than CHF 1 billion (£850 million). Within the healthcare solutions business area, Datwyler designs, develops and manufactures solutions for injectable packaging and drug delivery systems to facilitate customers to create a safer medical environment of tomorrow. Looking back on more than 100 years of history, Datwyler is a reliable partner, now and in the future!

ABOUT THE AUTHOR

Dirk Borghs, Chief Executive Officer of Datwyler Healthcare Solutions, graduated as an engineer in Materials Sciences from KU Leuven University (Belgium) and gained a Master's degree in Finance and Marketing. Mr Borghs joined the Datwyler Healthcare business as Technical Manager. He later became Head of Global Quality and Engineering and then ran US Operations 2001-2006. Later, as Vice-President Strategic Projects and Global Procurement, he led planning and implementation of Datwyler's FirstLine™ manufacturing standard in Belgium and the greenfield facility in India. Mr Borghs then oversaw Datwyler's main healthcare plant in Belgium, became Senior Vice-President Operations in Europe for Datwyler Sealing Solutions, and in 2017 oversaw Global Operations and Supply Chain before being named Chief Executive Officer of Datwyler Healthcare Solutions in 2020.

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