

TOWARDS A SUSTAINABLE FUTURE

Annual Sustainability Report 2022

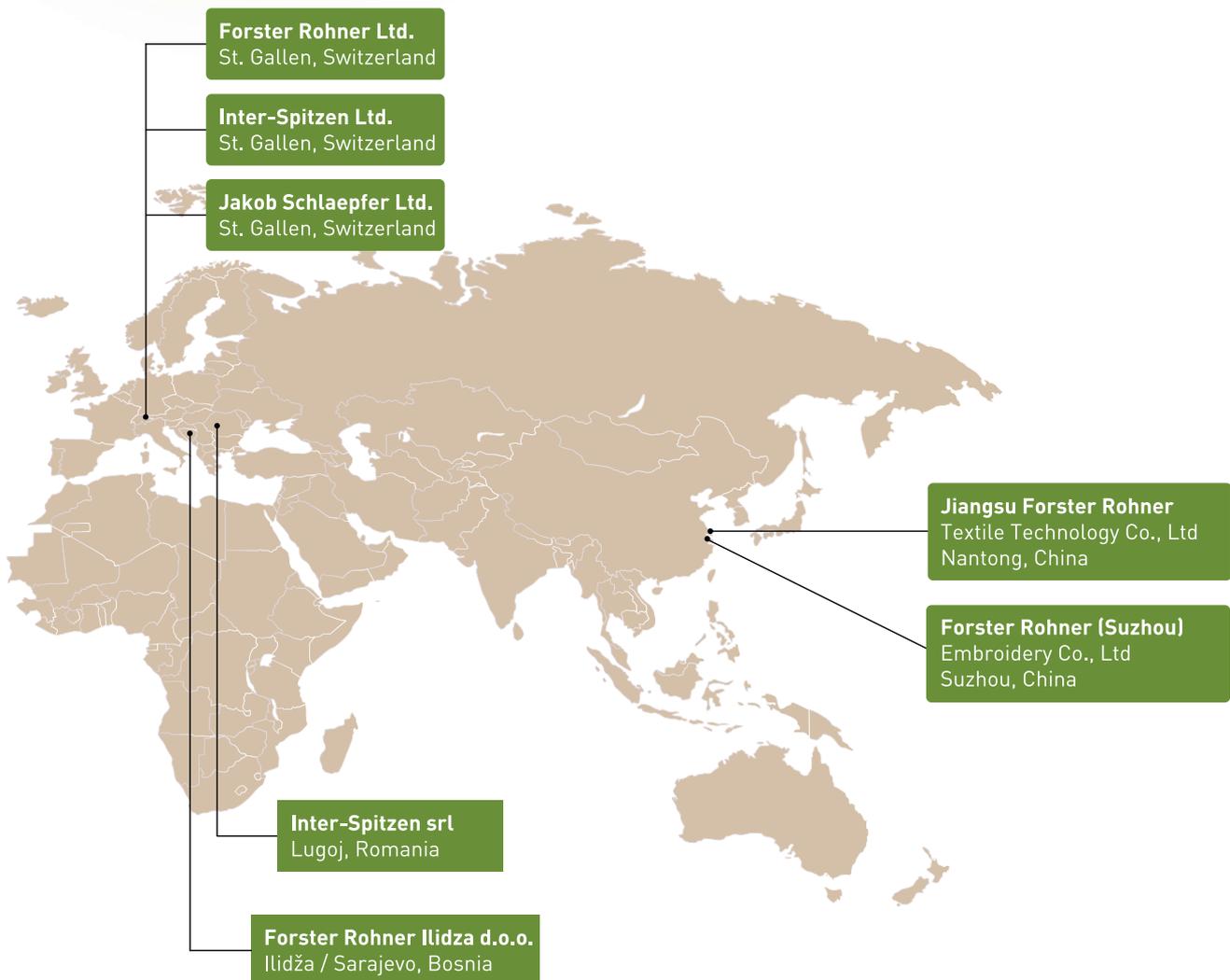


COMPANY PROFILE

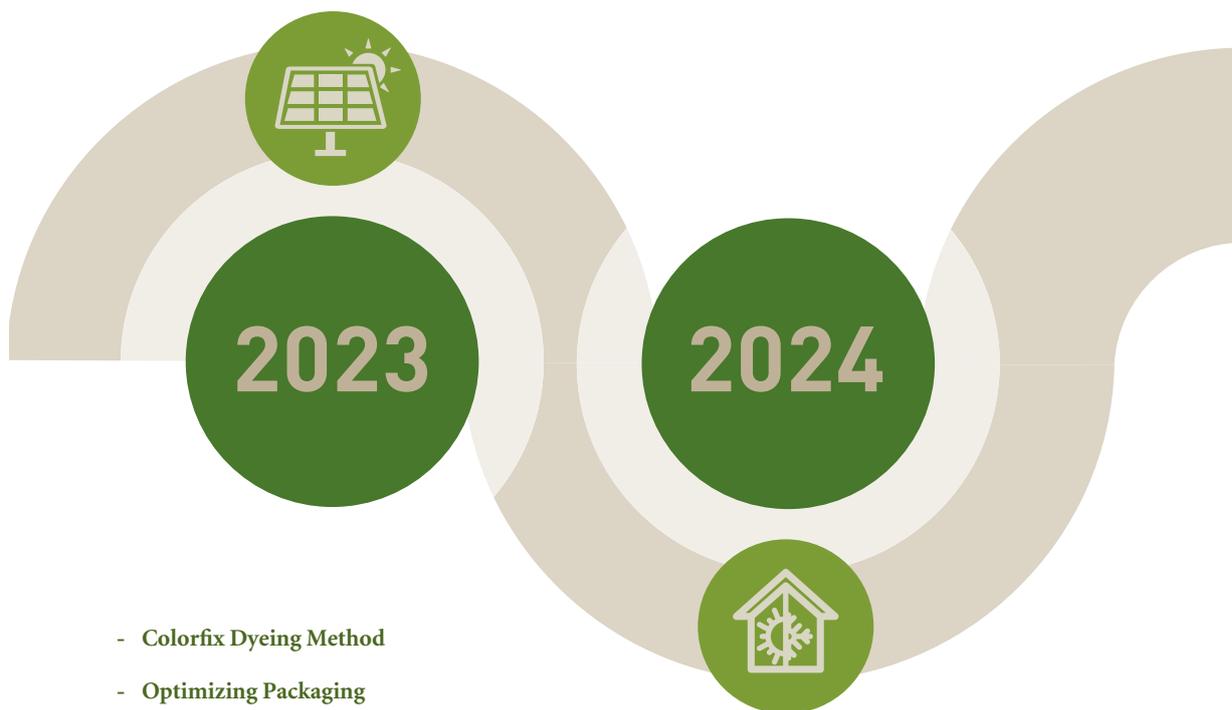
Family owned embroidery company

The Forster Rohner Group is a St. Gallen-based family owned embroidery company whose products are used in haute couture fashion, prêt à porter de luxe and lingerie as well as in the technical textile industry. Today the group is led by the fourth generation of the Forster family with Caroline and Emanuel Forster as co-CEO. The group owns the brands Forster Willi and Jakob Schlaepfer, both of which exemplify high end textiles through the use of a diverse range of textile techniques, from sequins to

laser-cutting, print and embroidery, all at the very highest level of luxury. In the tradition of artistic embroidery, Inter-Spitzen and Forster Rohner Lingerie have been creating collections for the international lingerie market for decades. Forster Rohner Textile Innovations develops and produces technical textiles based on the highly sophisticated capabilities of modern embroidery techniques. Forster Rohner Group manufactures on its own industrial sites in Switzerland, Romania, Bosnia and China.



FORSTER ROHNER SUSTAINABILITY PIPELINE



- Colorfix Dyeing Method
- Optimizing Packaging
- Water and Energy reducing project Inter-Spitzen Romania
- Forster Rohner HQ Building: Solar Panels, Energetic building renovation
- Forster Rohner China, Solar Panels
- Bata institute accreditation for Ilidza laboratory Bosnia
- ISO 9001 Inter-Spitzen Romania
- ISO 9001 Forster Rohner Bosnia
- Forster Rohner HQ Building: Connection to district heating / Switching from oil to alternative heating
- My climate Science based Targets Initiative SBTi

SUSTAINABILITY AT FORSTER ROHNER GROUP

The Forster Rohner Group strives to minimise the environmental foot-print of its production processes and products. In recent years, we have therefore taken a determined path towards sustainability. Our efforts range from the sustainable control of our supply chain, optimising

the processes of production to modernising our infrastructure. The universal goal is to save resources and reduce emissions. With this report, we would like to inform our stakeholders about completed, ongoing and upcoming projects as well as targets reached.



HIGHLIGHTED PROJECT 1

Sustainable dyeing on microbiological bases in Bosnia in exclusive partnership with Colorifix Growing colours using microorganisms



Colorifix process

Colorifix is a biotechnology company based in the UK, that has pioneered the first entirely biological process to produce, deposit and fix pigments onto textiles. Using a synthetic biology approach, it offers a radically different solution to incumbent dyeing technologies that entirely cuts out the use of harsh chemistry and leads to huge reductions in water and energy consumption.

Dyes are an essential part of the textile and fashion industries. The majority of dyes today are made from fossil fuel based chemicals. The production process for the dyes is costly in terms of energy and water required. As demand for sustainable practices grows across the textile supply chain, Colorifix has proven through its latest environmental assessment that its biologically synthesised dyes are significantly less harmful to the environment than conventional, chemically synthesised dyes.

Synthetic dyes also produce toxic waste, causing an environmental hazard. Since 2019 Forster Rohner has an exclusive partnership with the UK based company Colorifix for embroidery and lace dyeing. Together with Forster Rohner Bosnia they submitted their license application to Ministry of Education and Science on 19 October 2022 and Mr. Fadil Novalic, Prime Minister of Bosnia and his assistant Aida Soko visited Forster Rohner Bosnia and confirmed that the application is being processed.

Colorifix is a pioneering biotech company that has developed the first entirely biological dyeing process. The Colorifix technology is aiming to revolutionise the textile industry with a substantial environmental impact by removing the need for any of the harsh chemistry used in conventional techniques and significantly reducing the amount of water and energy used in the manufacturing process. Their mis-

sion is to change textile dyeing into a more environmentally friendly, socially responsible and economically viable industry. Colorifix has pioneered the production, deposition and fixation of natural pigments on a diverse range of fabric. The company uses synthetic biology to take inspiration from the natural world and copy how nature makes colours.

They then grow these colours using microorganisms (very similar to how you make beer but instead of alcohol, they make colours). This means the pigments are made from entirely green and renewable chemistry, as opposed to hazardous petrochemicals.

The results of Colorifix's Life Cycle Assessment (LCA) strengthen the Norwich-based compa-

ny's position as the emerging leader in supplying environmentally friendly dyes to textile producers and fashion brands globally.

Orr Yarkoni, CEO of Colorifix said: **“Fast fashion and a changing environment have rightly focused consumer attention on the impact of the textile and apparel industries. The dyes that colour our clothes are all too often made and applied through a process that damages the planet by using too much water, power, and toxic chemicals. We started Colorifix to develop a natural alternative to this crucial input in the textile supply chain. We are delighted with the results of our Life Cycle Assessment, which demonstrates the environmental advantage of the Colorifix technology.”**



Colorifix colour cards



Colorifix Bioreactor, Cambridge pilot site

Biologically synthesising colours

With recent funding from H&M’s venture arm H&M CO:LAB, Colorifix continues to develop its process for biologically synthesising colours as they occur in nature.

DNA sequencing of a leaf, stone, flower or feather is the basis of Colorifix pigments that are authentically leaf green, pebble grey, daisy yellow or raven black. The company turns pigments into dyes using microorganisms that multiply during fermentation. The natural bonding elements within these microorganisms fix pigments to textiles with far fewer of the added salts that conventional dyeing requires.

The process uses renewable feedstocks, far less water and other resources, and virtually eliminates the use of toxic chemicals.

The LCA, conducted at a dye house in Portugal and in a poly-cotton substrate, compared Colorifix dyeing to conventional dyeing across a range of factors like water, electricity, and natural gas consumption. It also analysed the relative impact of dyeing on resource depletion, global warming, and other macro-environmental factors.

Jim Ajioka, the Colorifix CSO remarked:

“The LCA of our process is essential as it not only confirms our projected reduction in environmental damage, but allows our partners in the dyeing industry to estimate potential monetary savings if they use Colorifix technology. Moreover, the LCA highlights where improvements in the process could lead to even greater reduction in environmental damage”.

Lesser impact

Across every single factor, the Colorifix process had lesser impact than the conventional dyeing process run at the same plant, including:

77% reduction of water usage

80% reduction in chemicals usage

71% reduction in natural gas usage

53% reduction in energy

31% lower contribution to global warming

38% lower contribution to ozone layer depletion

61% lower contribution to abiotic depletion of elements, largely through lower usage of added salts

37% lower contribution to eutrophication, or the environmental impact of excessive use of fertilisers and other macronutrients.



International expansion

Colorifix has been scaling up and preparing for international expansion since May, when it closed an £18m Series B fundraising led by H&M CO:LAB and joined by Regeneration.VC, Cambridge Enterprise, Sagana, Bombyx Capital Partners and others. The company has de-

veloped partnerships with sustainable clothing brands including Pangaia.

Contact the Colorifix team for complete results of the Life Cycle Assessment. For more information about Colorifix dyeing technology visit colorifix.com.

HIGHLIGHTED PROJECT 2:

Global Recycled Standard (GRS) Certification Transparency in our value chain



In 2021, we have set our first milestone in the certification with GOTS for our sites in Switzerland, Bosnia and China. In July 2022 we successfully certified our factory in Romania. In 2022, we are proud that the headquarter of Inter-Spitzen AG and Forster Rohner AG in St. Gallen as well as all our production sites in Switzerland, Bosnia, Romania and China have achieved the second milestone – a GRS certification.

Traceability is essential for us to drive change and understand our complete supply chain. This builds the foundation for a sourcing strategy to reduce our impact in fashion. GRS is designed to push the use of recycled materials. However not only this, the certification encouraged us to review our products in a holistic way meaning that we focused on materials, chemicals, energy and water saving production technologies as well as safe and practical work environments for our employees.

We are constantly in dialogue with our suppliers and brands, seeing the need for the textile chain to pull together to face the world's challenges of today. Climate action starts at the source of materials we chose but every production step along the value chain can and must significantly influence the foot print of the final product. GRS plays – contrary to GOTS which is the leading textile processing standard for organic fibers worldwide and therefore carries the highest importance in regards to our outerwe-

ar embroideries – a major role in sustainable production for lingerie. GRS-certification – as well as GOTS certification – works with 2 types of certificates: Scope Certificate (SC) and the Transaction Certificate (TC). The aim of GRS is to encourage higher proportions of recycled content in products while at the same time to reduce the harmful impact of production on people and the environment.

The SC is valid for one year and attests that we, as a company, fulfill the standard's requirements. GRS sites are required to meet strict social and environmental requirements. Chemicals with harmful potential are not allowed to be used on GRS products. GRS sites must ensure traceability from incoming materials to outgoing products. Processes to avoid the mixture of certified and uncertified material must be established.

The TC is issued for specific goods and contains the information from the delivery note meaning it provides assurance that there is no gap in the value chain. TC makes sure the identity of the recycled content is maintained from raw material to final product. Products that meet all requirements may be labelled with the GRS logo. The certification of every company within the value chain is absolutely necessary. Starting with the recycler, the yarn supplier, the fabric manufacturer, the dyer and embroiderer, the garment maker and finally the retailer.

Aligning and achieving the key points in our value chain:

A higher level to monitor traceability

» to track and trace recycled materials

» to increase the use and value of recycled materials

» to prolong the lifecycle of materials

» to increase the value of timeless materials

» to improve social guidelines to eliminate health –risk of workers, as well as consumers

» to reduce the ecological footprint within the supply chain

» to reduce the harm to the environment



GRS is another tool which helps to keep track of sustainability at every step of its production level resulting in the healthier choice in resources from the beginning until the finished end product at a brand. We want to help to make conscious progress, leading the sustainable mission to drive the consumer in an ethical and sustainable manner.



Certified by Control Union
CU 1152250



Certified by Control Union
CU 1152250

HIGHLIGHTED PROJECT 3:

Promotion of renewable energy

Renewable energy is energy derived from natural sources that are replenished at a higher rate than they are consumed. Sunlight is such a source that is constantly being replenished. Renewable energy sources are plentiful and all around us. Fossil fuels - coal, oil and gas - on the other hand, are non-renewable resources that take hundreds of millions of years to form. When burned to produce energy, they cause harmful greenhouse gas emissions, such as carbon dioxide. Generating renewable energy creates far lower emissions than burning fossil fuels.

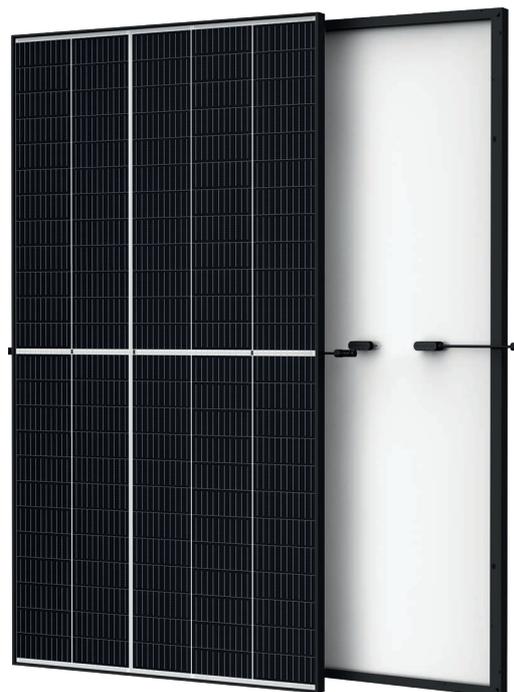
Transitioning from fossil fuels, which currently account for the lion's share of emissions, to renewable energy is key to addressing the climate crisis. Solar energy is the most abundant of all energy resources and can even be harnessed in cloudy weather. The rate at which solar energy is intercepted by the Earth is about 10'000 times greater than the rate at which humankind consumes energy. Solar technologies can deliver heat, cooling, natural lighting, electricity, and fuels for a host of applications.

With the growing threat of climate change due to the excessive release of carbon emissions, Forster Rohner, as well as many other industries, was looking to clean energy alternatives as a replacement of traditional fossil fuels and as a solution to become independent of external energy suppliers. Factory buildings are often the ideal place to install solar panels due to the unused square footage on their roofs. With a sizeable coverage area, solar panels can generate large amounts of power to meet the demands of the building's energy consumption including the production facilities inside. A big advantage is the regular time of use in industry. While electricity consumption in private buildings

is often higher when the sun is not shining, it is usually the reverse in industrial halls: people work there mainly during the day, i.e. precisely when the energy yield is particularly high.

In 2022, during the first stage of a comprehensive building renovation campaign, Forster Rohner and Inter-Spitzen have invested heavily in solar energy at its sites in Switzerland, Romania and Bosnia. A total of 2'500 m² of roof area was covered with solar panels with a total investment of a high six digit Swiss Francs amount. The total annual power output reaches more than 650 MWh, which results in a CO₂ saving of over 50 tonnes.

Forster Rohner is planning further investments in the headquarter building in St. Gallen, Switzerland as well as on the two sites in China in 2023. In addition to the further independence from local electricity suppliers, this is the next step towards renewable energy sources.



Trina Solar TSM 400-DE09.08 Vertex-S



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