



FOR OUR ENVIRONMENT



TRISA AG  
 CH-6234 Triengen | Switzerland  
 Phone +41 (0)41 935 35 35  
 www.trisa.ch  
 info@trisa.ch



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# SUSTAINABILITY IN OUR DNA

Harmony between people work and the environment is deeply rooted in our conscience. For over 50 years, long before the issue of ecology was on everybody's lips, TRISA attached considerable importance to environmental issues. Many milestones bear testimony to our company's commitment. An intact environment and nature are essential for our high quality of life.

## Dear Readers

The following pages are intended to give you an insight into our key ecological achievements. In order to face up to our responsibility to our employees, customers, society and the environment alike, the ongoing sustainable development of TRISA is based upon economic, social and ecological considerations.

TRISA has a long track record in the field of ecological sustainability, not only in manufacturing, but also with regard to our processes, buildings and products.



From the early days, TRISA has relied on sustainable building materials, alternative sources of energy, careful production processes and energy efficiency. Not only with our products are we leaders in terms of quality and innovation. By taking advantage of renewable raw materials, bioplastics, recycles in the sense of circular economy and intelligent packaging solutions we make an active contribution to the environment.

We hope that you will find it an interesting read.

Adrian Pfenniger, CEO





SUSTAINABLE  
INFRASTRUCTURE  
AND PRODUCTION

# THE SUN AS SOURCE OF ENERGY

TRISA was one of the first Swiss companies to take important steps towards the responsible and careful economical use of energy sources. This includes the use of resource-saving technologies, the optimisation of operational processes and the avoidance of materials that are harmful to health and the environment. To generate electricity TRISA takes advantage of the possibilities offered by photovoltaic systems whereby solar cells convert solar radiation directly into electricity, free from emissions. By using this climate-friendly and inexhaustible energy source, TRISA makes an active contribution towards combating harmful greenhouse gases.

*For a long time the pioneers of solar energy were not taken seriously. Solar energy was considered too expensive and unstable. These prejudices, however, have long since been dispelled. From a distance of around 150 million kilometres, the sun delivers environmental-friendly energy. Solar energy can replace fossil fuels effectively and thus considerably reduce environmental pollution.*



▲ On the flat roof of «Werk 2», a state-of-the-art photovoltaic installation produces electricity to meet the requirements of more than 80 single-family homes.

TRISA has been benefiting from the use of solar energy since 1998. On the roofs of TRISA's corporate buildings collectors that cover an area of more than 4,000 m<sup>2</sup> produce environmental-friendly electricity. With photovoltaic systems, TRISA produces a total of around 680,000 kWh of solar power, representing the annual consumption of roughly 140 single-family homes. A gradual extension of photovoltaic systems is already in the planning stage. Having its own sustainable energy generation plant, TRISA is less dependent upon price fluctuations in the energy market and uses this clean solar power exclusively for its own purposes.

The sustainable corporate management model used by TRISA not only involves state-of-the-art technologies to protect the environment but also a high degree of energy efficiency. TRISA generates environmental-friendly energy and aims to use this as sensibly as possible. This approach towards energy optimisation and recovery is also reflected by investments in energy efficient and climate-friendly solutions for buildings, plants and machinery. Thanks to the most modern ventilation and cooling systems, incorporating heat recovery, TRISA can for example, boast an annual saving of roughly 280,000 kWh in «Werk 3», which approximately corresponds to the energy consumption of around 60 single-family homes. The results achieved motivate us to continue investing in ecologically meaningful measures.

## TRISA HEATS WITHOUT OIL

A growing percentage of wood harvested in Switzerland is replacing fossil fuels and is converted into heat using wood-fired systems. TRISA has been heating with wood chips from local forests for a number of years and is thus following an ecologically sustainable path. Thanks to our heating network, TRISA's buildings and other properties in the village are supplied with renewable energy from a district heating network. TRISA thus uses this CO<sub>2</sub> neutral fuel consistently and does not depend on a single drop of oil to generate heat.



*For TRISA the age of heating with fossil fuels is now a thing of the past. All oil-fired boilers were removed and replaced with equipment for environmental-friendly energy sources. In 2013, TRISA invested in a modern woodchip heating system and ever since has been supplying «Werk 1» and «Werk 2», as well as other buildings in the centre of the village of Triengen, with sustainable thermal energy. In addition, a wood pellet heating system is being used in «Werk 3».*



Installation of steel pipes for the district heating system. ▶

During the initial years of operation, the ecological heating system was continuously optimised and trimmed for energy efficiency. In the meantime, the Triengen housing cooperative and adjacent properties have joined the heating network. Following the successful start of the woodchip heating system in «Werk 1», TRISA made an additional investment in a new wood pellet heating system in «Werk 3». TRISA Accessoires and other neighbours were integrated into this heating network. In 2019, the heating pipework was extended to the «Gisler» area to facilitate provision of district heating to the newly built TRISA pension fund Minergie apartment blocks. This results in annual

savings of an additional 35,000 litres of heating oil and roughly 350,000 kWh of energy.

Our track record is impressive, with the number of energy consumers having more than doubled since 2013. TRISA's entire heating network saves 330,000 litres of heating oil, which corresponds to a reduction of roughly 1,000 tons of harmful CO<sub>2</sub> greenhouse gases. Thanks to energy management with the sustainable heating system it has been possible to reduce the total energy consumption by roughly 2 million kWh. This corresponds to the energy used by approximately 400 single-family homes. Every year!

Well-considered solutions for overall building management. Using sustainable building materials TRISA is able to consistently invest in pleasant working conditions. ▼



***TRISA uses all energy resources sparingly to reduce unnecessary CO<sub>2</sub> emissions. The principle of energy-efficient construction is a key instrument for reducing CO<sub>2</sub> emissions and is a declared objective to minimise the energy requirement in all new buildings and renovation projects.***

In general, TRISA considers a holistic approach to building management to be the key to the effective optimisation and control of energy consumption and running costs. It controls the entire building technology including heating and cooling systems, ventilation and air-conditioning, lighting, sunshades as well as fire protection and security systems. Thanks to systematic monitoring energy consumption is analysed continuously, weak points are identified, potentials for savings are determined and systems are optimised. The basis for this is around 120 installed energy meters that continuously record consumption.

In recent decades, TRISA has undertaken a number of construction measures to protect the environment and has received several awards for its policy of high energy efficiency. This includes a Class A energy efficiency certificate. TRISA is attested as having the highest energy efficiency class for building automation and technical building management in «Werk 3». This enabled certification for the most modern and energy efficient building technology to be achieved (in accordance with the SIA 386 110 and the European EN 15232 standards).

## EFFICIENT BUILDING MANAGEMENT

More than 20 years ago, TRISA had already combined rational processes with energy- and cost-saving technologies with the new timber construction referred to as «Werk 2». One of the first photovoltaic systems in Switzerland, the recovery of production energy and a retention basin for rainwater, are among the special features of this light-flooded timber construction. The logistics and warehouse building was renovated and extended in 2019, meeting the latest energy and safety standards. Thanks to the well-insulated building shell, air conditioning was not required. On the flat roof, a state-of-the-art photovoltaic installation produces electricity to meet the requirements of more than 80 single-family homes. The lighting concept was also modernised with an intelligent lighting control system and LED light was installed throughout the building.

## USING WATER ENERGY SENSIBLY

In the quest for a cooling method other than with the environmentally damaging chlorofluorocarbons (CFCs), TRISA has revisited the age-old physical principle of adiabatic evaporative cooling. In this process, evaporating water absorbs energy from the air, which cools down as a result. For years, TRISA has been successfully using this method of air-cooling in production halls as a means of re-cooling chillers and for process cooling.



*People here can hardly imagine what it would mean if water was to become a luxury commodity. In terms of water resources Switzerland is extremely privileged compared to other countries. However, water is becoming scarce and its careful use is of great importance. TRISA uses this valuable resource for different cooling systems and, wherever possible, takes advantage of rainwater.*

In Wellnau, above Triengen, surface water is stored in a reservoir and used as natural cooling for the thermoplastic injection moulding machines via heat exchangers. These machines heat up the granular material in our factories. For cooling purposes, an annual water volume of 160,000 m<sup>3</sup> is used before the clean water is returned into the natural water cycle. The energy saved is of the order of 1.3 million kWh, representing the annual consumption of roughly 260 single-family homes.



TRISA encourages a sense of responsibility for the environment at all levels of the company. Every employee can make his or her personal contribution towards the careful use of resources during everyday work. Only a small amount of the tap water used daily has to be of drinking quality. For this reason, TRISA collects and stores rainwater. By using this lime-free water for flushing toilets, for example, the company can save 3,000 m<sup>3</sup> of precious drinking water annually.



◀ In Wellnau, above Triengen, surface water is stored in TRISA's own reservoir.

## SUSTAINABLE LOGISTICS SOLUTIONS

*In addition to alternative energy sources and energy efficiency in production and buildings, TRISA reduces CO<sub>2</sub> emissions using logistically reasonable processes. Logistics and transport are among the biggest emitters. TRISA considers efficient, resource-saving logistics processes and optimised internal and external goods transport to be important components of their commitment to an intact environment.*



With regard to the purchase of production materials and the shipping of manufactured products to different countries, TRISA is working together with partner companies who have signed up to the responsible use of resources. When transported by sea, containers are mostly shipped overseas using stable plastic mats, so-called «slip sheets» instead of wooden pallets. These save resources and facilitate space optimised shipping, as reflected in the average reduction of 20 percent in the freight volume.

Even between our production plants, short and direct transport routes are important. The necessary journeys to the different TRISA factories in Triengen are optimised with the help of a well thought through traffic management system. An important ecological contribution is also made by a fully automated high-bay storage facility built in 2015, which offers space for roughly 9,100 pallets. Thanks to the new building, workflows could be designed more efficiently, and the frequency of transport drastically reduced.

## MILESTONES OF PAST YEARS

**1998** TRISA's new ecological timber building with a photovoltaic installation

**1999** TRISA receives the environmental award for its special contribution towards environmental protection

**2003** Certification according to ISO 14001 environmental management system

**2004** TRISA Electronics new building with ecological photovoltaic installation

**2005** TRISA certified according to FSC (Forest Stewardship Council)

**2008** New building «Werk 3» with state-of-the-art insulation and heat recovery technology

**2009** TRISA my Planet ecological toothbrush launched

**2010** Energy efficiency Class A (SIA) implemented in «Werk 3»

**2013** TRISA introduces wood chip heating and dispenses with oil heating

**2015** Fully automated high-bay storage facility with optimised environmentally-friendly logistics

**2016** Pellet heating with heating network in «Werk 3»

**2017** Founder house renovation with latest generation photovoltaics

**2018** Energy-efficient renovation of «Bau 82» and expansion of the photovoltaic installation

**2019** Expansion of the heating network and heat recovery



Over **1'000'000** toothbrushes are produced daily



Annually produced **solar energy** corresponds to the energy consumption of around **140** single-family homes



Packaging made of more than **90%** recycled material



Thanks to our **energy-management** **2** million kilowatt hours are saved annually



**100%** recycled PET is used for the **TRISA We Care** toothbrushes



Our **wood chip heating** enables us to save around



**18** fuel tankers of **heating oil** every year



The handles of **TRISA Natural Clean** toothbrushes are made of **100%** FSC-certified **Swiss beech wood**



The length of the **heating network** corresponds to **19x** the height of the **Eiffel Tower**





## SUSTAINABLE PRODUCTS AND PACKAGING



## TRISA FOCUSED ECOLOGICAL PRODUCTS EARLY ON

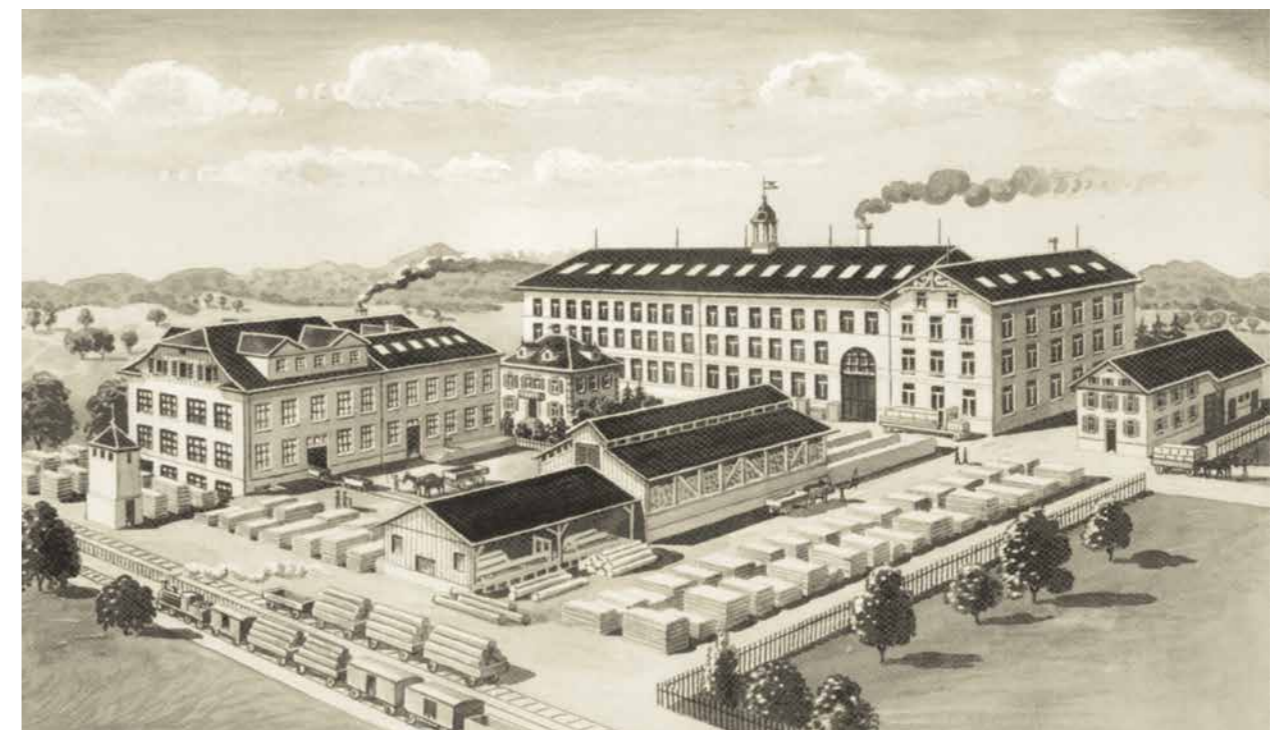
*The first TRISA toothbrush manufactured back in 1903 was already ecological. The handle was made of wood and pig hair bristles were drawn by hand into the brush head. Owing to the elaborate production process, these toothbrushes remained a luxury item for a long time. Even hairbrushes, clothes brushes, moustache brushes, shaving brushes and many other household and agriculture brushes were made from wood and natural bristles.*

As time went by, tufting and thermoplastic injection moulding machines replaced manual work. During the years of technical progress and rapid growth, TRISA paid a lot of attention to environmentally friendly products and packaging.

In the 1990s TRISA set a clear signal for the careful use of resources with material-saving designs and the first interchangeable head toothbrush named TRISA my Planet. To this day, controlled and clean recycled materials are being used for this toothbrush, representing a saving of more than 70 percent on new materials. In the meantime, toothbrushes made of sustainable materials have become a significant market segment.



◀ Advertising campaign in the 1930s with the «Dora» toothbrush.



# USING FORESTS SUSTAINABLY

Forests cover almost one third of Switzerland's territory, providing wood as natural renewable resource. The total stock of wood making up the forests across the country is about 420 million m<sup>3</sup>. Every year around 10 million m<sup>3</sup> of wood is regrown in Swiss forests. An increasing amount of wood harvested in Switzerland is replacing fossil fuels, increasing sustainability. In addition to its use in energy generation, TRISA uses wood, a versatile raw material, for manufacturing products.



*Sustainable forest management in Switzerland would permit much greater use of wood than is the case now. Therefore, the use of wood for TRISA's oral and beauty care products makes ecological sense. In addition, local wood only needs to be transported over short distances and so the CO<sub>2</sub> balance is good.*

◀ At present, roughly 4.5 million m<sup>3</sup> of wood are harvested annually in Switzerland.

TRISA is committed to the careful use of resources throughout the entire company and uses FSC-certified (Forest Stewardship Council) materials in the hygiene sector, for printed matter, for packaging and, above all, also for end products. The FSC label is a symbol for wood products sourced from environmentally and socially responsible forestry. In contrast to conventional forest management, FSC satisfies basic requirements such as regular inspections and higher ecological standards. The history of the wood can be precisely traced back, from the management of the forest to the sold product. This gives consumers the certainty that they are buying a product, which guarantees the continuity and care of the forest.

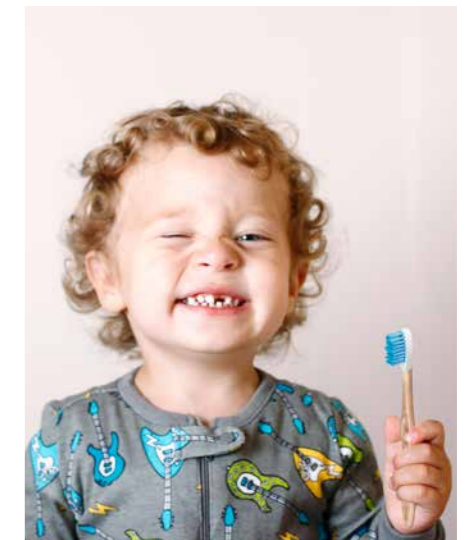




## WOODEN PRODUCTS ARE IN VOGUE

*The use of wood as a natural raw material for TRISA products is an integral part of the company's history. While wooden toothbrushes disappeared from the scene for a long time, the raw material remained vital in other TRISA product categories. Thanks to their specific material properties, FSC-certified beech and ash wood is perfectly suited for processing into high-quality wooden hairbrushes. For products making up the interdental range, such as dental sticks, we also use dense, flexible birch wood.*

FSC-certified Swiss ash wood is used for the TRISA Natural Brilliance hairbrush range. ▶



Once again, there is a big demand for natural wooden products, including toothbrushes. With TRISA Natural Clean and TRISA Natural Clean young, we have been able to launch environmental-friendly wooden toothbrushes that have become very popular. The ergonomic handles of these toothbrushes are made of FSC-certified Swiss beech wood, whilst the soft bristles, as well as the brush heads, are based on renewable raw materials from the castor oil plant. With this innovative combination, this ecological toothbrush convinces with its high cleaning performance and being free of petroleum-based plastics. The packaging consists of recycled cardboard and 100 percent recycled PET.





## TRISA FOCUSES ON CIRCULAR ECONOMY

The TRISA We Care sports an elegant and resource-saving handle made from recycled PET bottles. The material used is reprocessed for its «second life» as a toothbrush according to the strictest hygiene guidelines. This is an innovation in the perfect sense of circular economy. Its aim is to ensure that our valuable raw materials are recycled as often as possible. The bristles are also sustainable, as they are entirely based on natural resources. TRISA We Care looks after your teeth whilst caring for the environment at the same time.



▲ Together with our partners, TRISA employees are evaluating new materials in order to meet the demands for ecological sustainability.

*TRISA conducts research into replacing fossil-based raw materials with sustainable alternatives for all its product ranges. Even today, numerous products are already manufactured from recycles and different bio-based plastics are already in production. These are made of renewables such as wood or the castor oil plant.*



In our range of products the brush heads of the TRISA Natural Clean and TRISA Natural Clean young, as well as the filaments for various products, are made from the renewable castor oil plant. This robust plant, also known as «ricinus communis» grows in barren soil without additional irrigation, on land, which is not suitable for growing food. The oil, pressed from the plant's beans, is used to manufacture toothbrush heads and filaments.

Under the guiding principle of «Vision Zero», our teams continue to conduct intensive research in the fields of renewable raw materials, all types of recycles, alternative materials and the general minimisation of the use of resources. Our product range in this field is being further expanded and it goes without saying that we do not compromise in terms of functionality, hygiene, safety and ergonomics. With our innovative quality products, we aim to offer our customers real added value whilst protecting the environment.





## LONGER SERVICE LIFE

*TRISA is driving the development of high quality products made from environmentally friendly materials. At the same time, we are extending the service life of our products. This can be realized for electric toothbrushes as well as for manual toothbrushes with replaceable heads.*

For more than ten years, TRISA Sonicpower has combined the ease of use of a manual toothbrush with the advantages of a sonic toothbrush. Over the years, it has become the best-selling sonic toothbrush in Switzerland and is now in its second generation, providing durability and excellent value for money. Thanks to its long service life, users simply have to replace the brush head from time to time. Hygienic recycled material is now used for these highly effective brush heads, thus saving on virgin materials.



▲ The replaceable brushes made from recycled plastic and suited for TRISA Sonicpower and TRISA Forever make an active contribution to the environment.

The sustainable replaceable brushes of the TRISA Sonicpower can also be used for our latest innovation. The TRISA Forever combines high cleaning efficiency, sustainability and design. The handle is made of durable aluminium. The impact and shock resistance, together with its resilience, make this material ideal for a long useful life. Less plastic is used for the durable and elegant toothbrush handle and the replaceable brush heads, thus making a valuable contribution to the environment.

## SMART PACKAGING SOLUTIONS

*Packaging is a feature of everyday life, providing useful and necessary functions. When it comes to manufacturing and disposal, here too the focus is on natural and resource-saving processes and materials. TRISA pays particular attention to their products but also offers environmentally friendly solutions for packaging.*

TRISA is constantly researching new, sustainable packaging materials in order to make existing packaging more environmentally friendly. Apart from issues such as stability and hygiene, environmentally friendly design and material selection, waste volumes and disposal possibilities are among the key criteria in the development of new packaging solutions.

For TRISA Natural Clean young, 100 percent recycled PET is used for the transparent blister foil. ▼



The ecological compatibility of packaging is given high priority at TRISA. We have already launched numerous sustainable concepts. In the meantime, the backer cards of our products are almost completely made of recycled fibres. To achieve the required thickness and stiffness, certain types of cardboard require a small percentage of mechanical wood pulp. For the transparent PET blister film, plastic is used which has a recycled content of at least 80 percent. The share of packaging components using 100 percent recycled PET is being greatly expanded. This includes packaging solutions comprising cardboard sleeves, blisters and boxes that are based on up to 100 percent recyclable cardboard.

## FOR A SUSTAINABLE FUTURE

We are grateful to manufacture products that spark joy and are beneficial to everybody's health and well-being. We are aware of our responsibility for future generations. Leading in innovation, quality and technology, TRISA intends to provide sustainable top performance in the future and to create real added value.

