

Whitepaper

THE GREEN WEY FORWARD

Solutions from WEYTEC are Green





Environmental Mission Statement

The WEY Group is committed to promoting a clean environment. We encourage the development and diffusion of environmentally friendly technologies and we take initiatives to proactively protect the environment. These principles are evident throughout the life cycle of our solutions.

Energy Consumption and Sustainability

Debates about the sustainability of systems and their CO₂ footprints are commonplace.

Today's IT systems are designed around the principles of information distribution and decentralised processing and visualisation. In this environment, the vast majority of total energy consumed relates directly to actual workplaces. Workstations and screens account for more than 90% of the total energy consumption of an IT system.

As a rule of thumb, one PC uses \approx 50W for the processor (including memory, interfaces and drives), 50W for each graphic card port and an additional 50W for each screen. These approximations assume modern energy-efficient settings and an average load. A PC with two screens, therefore, needs \approx 250W of electricity, which is subsequently dissipated as heat. This adds up to an energy requirement of 2 megawatt hours (MWH) per year when the PC remains in constant use, or a minimum of 0.5MWH when it is turned off at night and on the weekends.

The following assumptions have been used to calculate savings per workplace per year.

Desktop Integration:

- Number of keyboards (Users) 2
- Total number of PCs 6
- Number of shared PCs 2
- Dual screen PCs (Y/N) N
- Power savings (W) 180
- CO₂ savings (kg) 1130

Remote Solutions:

- Number of desks (Users) 100
- Screens per desk 4
- PCs per desk 2
- Power savings (KW) 3500
- CO₂ savings (kg) 21,500

WEYTEC distributionPLATFORM:

- Number of keyboards (users) 100
- Number of shared PCs (Sources) 30
- Power savings (W) 18,750
- CO₂ savings (kg) 115,000

Green Aspects of WEYTEC Solutions

In general, WEYTEC solutions reduce energy consumption by reducing the number of PCs and improving the efficiency of cooling processes. Even though WEY components also produce heat, it is minimal compared to the energy which is saved. Measurable savings of up to 1 metric ton of CO₂ emissions per workplace per year are achievable. The long term impact on the carbon footprint is clearly positive.

WEYTEC distributionPLATFORM -

Multifunctional Keyboards -

Remote Solutions

The WEYTEC distributionPLATFORM and multifunctional keyboards provide shared access to information sources and enable PC sharing, resulting in significant reductions in the overall number of PCs required. This example illustrates the impact on CO₂ emissions of eliminating just two PCs. For comparison, a small car with a CO₂ emission ratio of 140g/km travels almost 8000 km to produce 1 metric ton of CO₂.

The implementation of the WEYTEC Remote Solutions allows centralised deployment of computers in



an environmentally managed system room. In addition to enhanced security and climate control, which prolong computers' life expectancy and improve comfort at the workplace, remoting PCs results in lower noise levels and maximized office space. Cooling systems are optimized in system rooms because there are fewer restrictions on ambient conditions like noise levels, air outlets and air conditioning thermal hubs. Air conditioners operate 25% more efficiently in system room environments.

Life Cycle Management

Solar Power

Rooftop solar panels at WEY Technology headquarters in Switzerland produce approximately 30,000 kWh per year, providing more than 60% of our power requirements since 2014. This alone saves almost 21 metric tons of CO₂ emissions per year.

WEYTEC further promotes ecology through engineering, re-engineering and process modification. Our hardware products are durable and our manufacturing and customer service processes ensure the longevity of components and systems.

Production

Sustainability analysis includes the measurement of energy consumption as well as the use of non-toxic materials during the production process. WEYTEC's commitment to environmental protection in manufacturing starts with the choice of welding compounds and includes stock management and our approach to product packaging.



Rooftop solar panels at HQ



WEYTEC recycles

WEYTEC has been soldering lead-free since 2004, and our soldering processes fully conform to the RoHS (Restriction of Hazardous Substances) directive. We use a water-based, halide-free soldering flux that is environmentally friendly and free of any VOCs (volatile organic compounds). This eliminates emissions caused by flux thinner and evaporation as well as the risk of fire from flux inflammation.

Production machines are shut off on evenings and weekends to reduce the temperature of soldering alloys from 265°C to 230°C. This saves energy and electricity. WEYTEC avoids over-production by using demand forecasting and planning techniques. Careful assessment of stock quantities and "just-in-time" production runs prevent waste.



Packaging and Shipping

By tailoring packaging to the product, WEYTEC optimises the protection of hardware components and keeps packaging to a minimum. WEYTEC ships CO₂ neutral with DHL gogreen - worldwide!

Maintenance and Repairs

Customer Service programs are designed to promote the longevity of our hardware. It is not uncommon to use WEYTEC multifunctional keyboards for more than ten years. Keyboards look and function like new after annual maintenance and cleaning. And when a device or component has a fault, we have our own in-house repair service.

Waste Management

WEYTEC collects and dismantles equipment when systems are taken out of service. 20-30% of the components can be re-used (i.e. key caps) without compromising the quality and reliability of new systems.

Waste products are recycled or disposed of efficiently. Re-using commodities preserves natural resources and protects the availability and pricing of raw materials. Together with local authorities and recycling partners (i.e. Immark in Switzerland and London Recycling in the UK), WEYTEC recycles a broad range of industrial and office materials.

Recycled Material per Year in Tons

- Copper 1.0t
- Printed Circuit Boards 1.5t
- Paper 2.5t
- Electronics 3.5t
- Cardboard 3.6t
- Styrofoam 8.0m³

Conclusion

At WEYTEC, sustainability begins with the green aspects of our IT solutions for trading floors and control rooms. It is astounding to realise how much energy can be saved by sharing PCs and maximising the efficiency of temperature control systems.

Our corporate green policy includes partial energy self-sufficiency and the production of clean solar power in Switzerland. We carry out environmentally responsible production processes and maintain our long-standing commitment to recycling.

WEYTEC continues to audit internal policies and re-engineer processes to maximise sustainability and minimize waste.