



Kapsch TrafficCom

Our Green Vision

Introduction

“Contributing to a sustainable future is our social responsibility.”

Georg Kapsch, CEO & Chief Sustainability Officer

The climate crisis is a major threat to humanity. It is our social responsibility to actively contribute to reaching the target of the Paris agreement, i.e., to limit global warming to 1.5°C by 2100 in comparison to pre-industrial times. Kapsch TrafficCom takes its responsibility for the environment very seriously and has a strong focus on climate

protection. For the CEO of Kapsch TrafficCom, it is the company's social responsibility to make a substantial contribution to global environmental sustainability. Climate protection is a core element of the company strategy 2027, its mission and its vision.

Under the Paris Agreement, countries have declared ambitious goals to reach carbon neutrality in the upcoming decades, mostly between 2040 and 2050. In parallel, the European Union is tightening its sustainability obligations, fostering the green economy. Climate protection is now one of the top priorities of the global community, at state level as well as at the individual level.

To meet sustainability goals and obligations, states had to set national climate targets. This is reflected in EU and national legislation, for example, EU Taxonomy Regulation, national CO₂ taxes or emission trading. Consequently, customers and investors are also increasingly asking for green solutions.

Particularly in the areas of climate change and air quality, Kapsch TrafficCom's business activities have a significant impact. The company's solutions help to reduce emissions caused by road traffic, such as CO₂, particulate matter (PM) and noise. This is also reflected in Kapsch TrafficCom's company vision: **“Challenging the limits of mobility for a healthy world without congestion”**.

Challenging the limits of mobility for a healthy world without congestion

To contribute to creating a greener and healthier world, Kapsch TrafficCom has set two environmental sustainability goals in line with its company vision and strategy:

> Green portfolio Positive ecological balance

Over their entire lifecycle, Kapsch TrafficCom products and services help to reduce more CO₂ emissions than they cause.

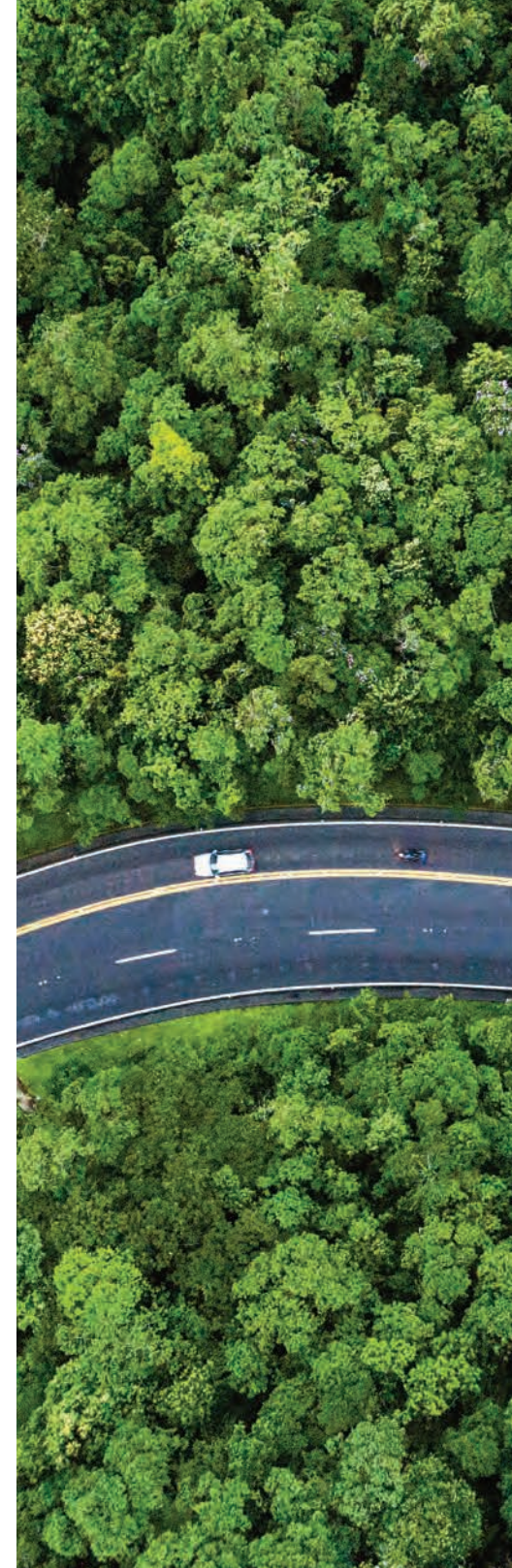
> Green company CO₂ neutrality by 2027

Kapsch TrafficCom aims to become CO₂ neutral by 2027, in accordance with the greenhouse gas protocol.

For further information, please have a look at Kapsch TrafficCom's sustainability website, the Mobility Report created by Kapsch TrafficCom and the annual Non-Financial Report, which, in addition to the environment, also addresses other sustainability areas, including human rights, employees and social responsibility.

Kapsch TrafficCom's business activities have no significant impact on other environmental areas, such as water or soil. These areas are therefore not in focus.

The content of this document is further detailed in the corresponding internal environmental sustainability guideline and associated requirements. Both are revised periodically. Their adherence is measured and reported to the Executive Board and responsible management.



Green portfolio

Positive ecological balance

Amongst all influencing factors, Kapsch TrafficCom's portfolio of products and solutions has the greatest leverage with respect to climate protection. Therefore, the company strives for a positive ecological balance of its product portfolio. By maximizing the emission¹ reduction potential of Kapsch TrafficCom's solutions during operations and, at the same time, reducing carbon emissions during their lifecycle, the solutions sold and operated can have a positive net effect on air quality (SDG 11 Sustainable Cities and Communities) and our climate (SDG 13 Climate Action) – and, thus, on the world we live in.

Kapsch TrafficCom is quantifying its entire portfolio's emission reduction potential and provides the current status in a factsheet on the corporate website. The company is also assessing the product carbon footprint of its key solutions and deriving emission reduction measures.

How do we get there?

Kapsch TrafficCom needs to decrease emissions related to its portfolio. For each key solution, measures to minimize the product carbon footprint must be implemented.

In parallel, it is necessary to realize the full emission reduction potential of Kapsch TrafficCom's green solutions in collaboration with current and potential customers. Particularly in transport, solutions are urgently required, as the sector currently accounts for almost a quarter² of all greenhouse gas emissions and these continue to rise globally.

Decrease the product carbon footprint

Reducing Kapsch TrafficCom's product carbon footprint enables higher efficiency and cost savings for customers and drives innovation. Its proactive disclosure demonstrates environmental stewardship.

In order to decrease the product carbon footprint, emissions related to Kapsch TrafficCom's portfolio's lifecycle (i.e., material, production, distribution, use, end-of-life phase) are permanently reduced. Note that the KTC portfolio does not cause any direct emissions during usage.

The following global requirements contribute to achieving Kapsch TrafficCom's sustainability goal **Green Portfolio. Positive ecological balance.**

Identify and realize emission reduction measures

- Calculate the product carbon footprint for each of Kapsch TrafficCom's products.
- Implement applicable environmental sustainability requirements.
- Verify the realization of the environmental sustainability requirements and report to the Executive Board, line management concerned, and the HSSEQ³ team.

Reduce power consumption during use phase

- Decrease the software product's required computational power well below the benchmark⁴ to reduce the sizing of hardware⁵.
- Apply sustainable coding practices (e.g., reducing run-time of the software and high peaks of CPU loads, only allocating RAM when actually needed).
- Design the hardware product with a power consumption well below the benchmark.

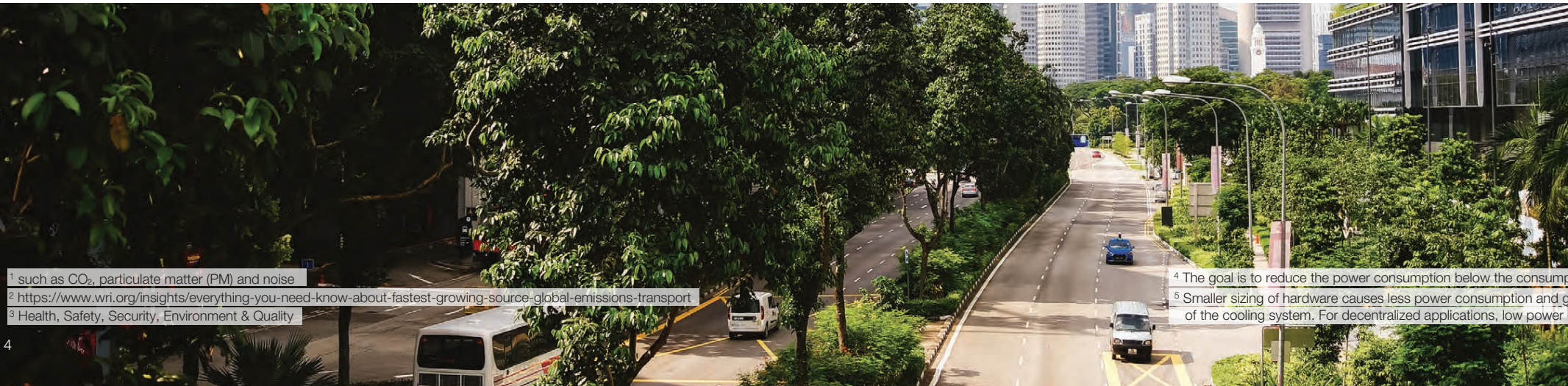
Reduce raw materials - with high carbon footprint

- Re-use existing infrastructure wherever possible.
- Give preference to a lean construction (e.g., pole solution) over gantry construction wherever possible.
- Give preference to materials with lower associated CO₂ emissions (e.g., wood over steel, reduce soldering with Nitrogen in manufacturing) wherever possible.
- Design products for a long lifetime.

Reduce waste

Regarding in-house developed hardware products, Kapsch TrafficCom follows the waste hierarchy: 1. Reduce, 2. Reuse, 3. Repair, 4. Recycle

Besides the long lifetime, repairability and a high degree of recyclability are mandatory product requirements. Complying with RoHS, REACH and WEEE, Kapsch TrafficCom contributes to the reduction of pollutant and electronic waste.



¹ such as CO₂, particulate matter (PM) and noise

² <https://www.wri.org/insights/everything-you-need-know-about-fastest-growing-source-global-emissions-transport>

³ Health, Safety, Security, Environment & Quality

⁴ The goal is to reduce the power consumption below the consumption of comparable products in the market.

⁵ Smaller sizing of hardware causes less power consumption and generates less heat. For data center applications, this leads in addition to less power consumption of the cooling system. For decentralized applications, low power consumption is an enabler for economic feasible energy self-sufficient solutions.

Save traffic emissions with Kapsch TrafficCom's portfolio

Kapsch TrafficCom's portfolio contributes to the protection of the environment.

Studies have shown that the application of access management (e.g., clean air zones) leads to reduced traffic and road charging fosters fleet renewal. Traffic management results in improved traffic flow.

All these solutions contribute to reducing emissions (CO₂, particulate matter, noise). More details can be found in this [fact sheet](#).

Kapsch TrafficCom's access management and demand management solutions safeguard the effects of traffic management and limit traffic volumes.

To roll out the full emission saving potential of Kapsch TrafficCom's solutions, an optimized application is required. Over time, Kapsch TrafficCom has acquired reliable knowledge on how to advise cities and customers regarding the reduction of their traffic-related emissions and the implementation of solutions at their best environmental performance.

At the request of clients, Kapsch TrafficCom measures and quantifies CO₂ emissions and analyzes traffic flow before and after the deployment of each of its solutions. These periodic measurements enable the customers to decide on adjustments to further optimize their system. The performance of a solution depends not only on its technical aspects, but also on local conditions,

public acceptance and the understanding of pricing schemes. All measures mentioned are most effective when applied in close collaboration with the customer.

Upon request, Kapsch TrafficCom's environmental sustainability experts can provide consultancy services to its clients.



Green Innovation

Kapsch TrafficCom is continuously enhancing its energy self-sufficient portfolio, i.e., minimizing electricity consumption and establishing power supply from renewable sources. To give an example, Kapsch TrafficCom is working on ways to make its tolling gantries more environmentally sustainable. This is to be achieved by reducing emissions related to the applied material (reduction of steel, replacement of steel by wood) and by minimizing the total power consumption of the electronic equipment and installing photovoltaic panels.

Kapsch TrafficCom actively seeks collaboration with its customers regarding ongoing sustainable innovations – please contact us via [KapschUP](#)

Green company

CO₂ neutrality by 2027

To become CO₂ neutral by 2027, Kapsch TrafficCom strives to decrease its emissions as much as technically and economically possible and compensate the remaining ones.



How do we get there?

Starting in 2021, Kapsch TrafficCom annually evaluates and reports its company carbon footprint in conformity with the Greenhouse Gas Protocol (GHG). The company will mainly lower greenhouse gas emissions related to Scope 1 and 2 by reducing power consumption wherever possible and gradually shifting to renewable energy at office and manufacturing sites. Kapsch TrafficCom also minimizes its main Scope 3 emissions by reducing the emissions related to its portfolio and employee mobility.

Remaining emissions will be overcompensated through achieving a positive ecological balance of the Kapsch TrafficCom portfolio and off-setting measures.

On the path to CO₂ neutrality, Kapsch TrafficCom obtains support from external consultancies. As part of the CARE⁶ program, Kapsch TrafficCom, together with other companies, collaborates with

an academic institute⁷ on collective action and responsible partnerships to share and reflect on sustainability-related experiences.

Besides collaboration and knowledge building, transparency is a key factor in sustainability. Kapsch TrafficCom publishes an annual Non-financial Report, participates in the Carbon Disclosure Project (CDP) and is currently expanding its sustainability reporting. Kapsch TrafficCom AG and its Austrian subsidiary for components manufacturing, Kapsch Components, have their efforts audited externally by participating in the Ecoprofit program⁸. Several companies of the Kapsch TrafficCom Group are ISO 14001 (environmental management system) certified and hold additional certificates of the ISO series. The current list of ISO certificates can be found here.

6 Collective Action and Responsible Partnerships

7 Institute for Business Ethics and Sustainable Strategy at the University of Applied Sciences Vienna (FH Wien): <https://ibes.fh-wien.ac.at/en/>.

8 Within the Ecoprofit program, experienced consultants support the implementation of environmental projects <https://www.wien.gv.at/english/environment/protection/eco/ecoprofit.html>.

Sources of greenhouse gas emissions

The GHG Protocol Corporate Standard⁹ classifies a company’s GHG emissions into three ‘Scopes’

- **Scope 1** emissions are direct emissions from owned or controlled sources.
- **Scope 2** emissions are indirect emissions from the generation of purchased energy.
- **Scope 3** emissions are all indirect emissions (not included in Scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions.

Scope 1. Direct emissions

The company’s factories have no direct greenhouse gas emissions. Therefore, Kapsch TrafficCom is not part of the energy-intensive sector. At Kapsch TrafficCom, Scope 1 includes the emissions caused by fuel consumption of the company fleet and emergency generators.

Scope 2. Indirect emissions. Purchased energy

At Kapsch TrafficCom, Scope 2 includes the indirect emissions from the generation of purchased

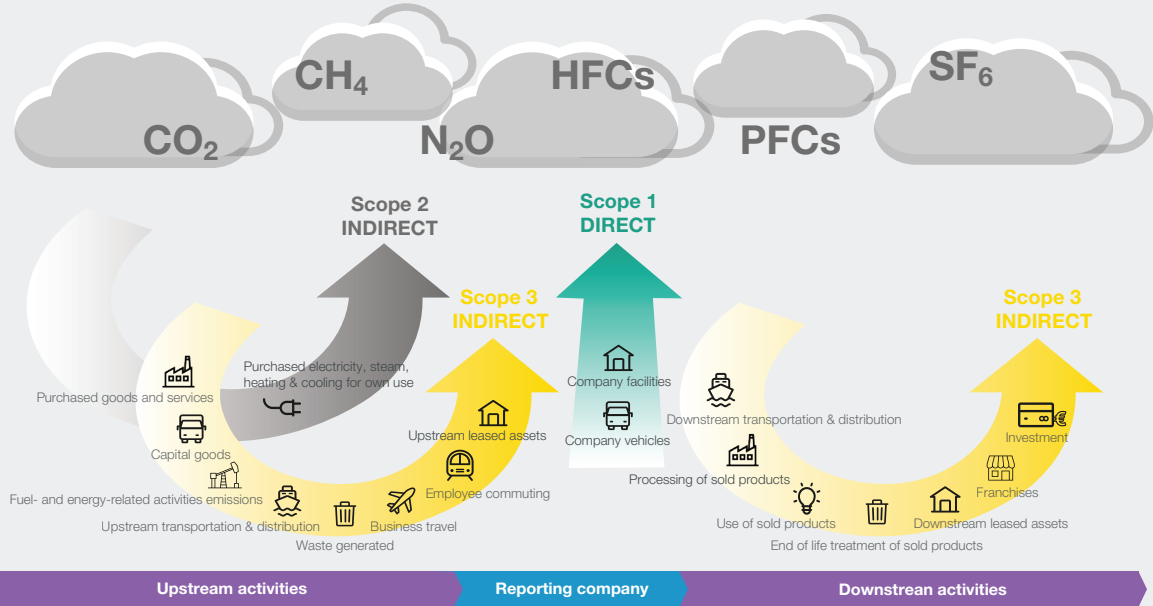
electricity, heating, steam and cooling at its numerous office sites in more than 30 countries as well as the two manufacturing sites:

- Kapsch Components (KCO) in Vienna responsible for global manufacturing excluding North America.
- Kapsch TrafficCom Canada in Mississauga responsible for manufacturing of products for the North American market.

Scope 3. Indirect emissions. Upstream and downstream

At Kapsch TrafficCom, Scope 3 categories with significant indirect emissions are use of sold products (C11)¹⁰, purchased goods and services (C1), business travel (C6), employee commuting (C7) and the end-of-life treatment of sold products (C12).

Emissions related to these categories cause the vast majority of Kapsch TrafficCom’s company carbon footprint. So, their reduction has the biggest impact when it comes to emission reduction. However, it is also the most complex scope to reduce, since the activities causing emissions can only be influenced indirectly by Kapsch TrafficCom.



Source: https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporting-Standard_041613_2.pdf

⁹ This paragraph was taken from https://ghgprotocol.org/sites/default/files/standards_supporting/FAQ.pdf.

¹⁰ Ci means GHG protocol Scope 3 Category i, (i=1,2,...,15).

Decrease the company carbon footprint

The following global requirements contribute to reaching Kapsch TrafficCom's sustainability goal *Green company. CO₂ neutral by 2027*

Decrease direct emissions – Scope 1

- Continue to reduce the number of company vehicles.
- Continue to reduce fuel consumption of company vehicles.

Decrease indirect emissions from purchased energy – Scope 2

- Reduce emissions caused by energy consumption of manufacturing.
 - Kapsch Components, an Austrian subsidiary of Kapsch TrafficCom AG for components manufacturing, has been participating in an environmental consultancy program for more than 10 years. Since then, Kapsch Components has been awarded the annual Ecoprofit certificate of the city of Vienna.
 - Kapsch Components has gradually decreased its environmental footprint and obtains its electricity from renewable sources.
 - Environmental performance continues to be one of Kapsch Components' main focus areas. This is reflected, for instance, in the optimization of the manufacturing process regarding energy consumption, the thermal restoration of the building envelope, and the gradual replacement of illumination by LEDs. The effectiveness of the actions is measured by regular energy audits.
- Reduce emissions caused by energy consumption of office locations.
 - Kapsch TrafficCom's office sites are evaluated in terms of their electricity, cooling- and heating-related consumption.
 - Usage of on-premise IT hardware has been minimized to reduce power consumption.
 - All sites where it is technically and economically possible are gradually switching to renewable energy providers.
 - For the selection of new locations, environmental criteria, such as availability of renewable energy providers, thermal condition of the building envelope or the accessibility of public transport are factored in.

Decrease indirect emissions from upstream and downstream – Scope 3

- Reduce emissions caused by the lifecycle of Kapsch TrafficCom's products.

This requirement has been detailed in the previous section. It covers the reduction of emissions in the Scope 3 categories purchased goods and services (C1), upstream transport & distribution (C4), downstream transport & distribution (C9), use of sold products (C11), and the end-of-life treatment of sold products (C12).
- Engage with suppliers to lower the carbon footprint of purchased articles (related to C1)

Kapsch TrafficCom engages with its major suppliers to obtain emission information on purchased products and information on suppliers' sustainability plans. Within Kapsch TrafficCom's supplier selection process, suppliers are obliged to answer more than 40 questions related to environmental aspects. They need to:

 - comply with all relevant laws, regulations, order and industry standards (including consumer protection, conflict minerals, REACH directive, safety regulations etc.) as well as established engineering practices
 - provide information (if available) on:
 - supplier's sustainability strategy and environmental goals
 - certificates regarding Environmental Management System, such as ISO14001 or EMAS
 - CO₂ footprint calculations of the supplied products, in the event that these have been assessed before

3. Reduce business travel (related to C6)

Kapsch TrafficCom's goal is to reduce the annual number of flight tickets purchased to less than 50% of the value in the financial year 2018/19 (i.e., the financial year before massive COVID-19 travel restrictions).

Second to the emissions related to the portfolio's product carbon footprint, business travel causes the largest proportion of Kapsch TrafficCom's total emission.

Initially, physical presence is essential to build strong relationships between customers and team members. But as soon this relation is established, many flights can be replaced by video calls. This saves emissions, costs, time and, in addition, is more convenient.

Business travel and associated emissions are monitored and reported on a monthly basis to the management and the environmental sustainability team. If the targets are at risk, the Executive Board is informed, and corrective actions are taken.

4. Reduce employee commuting (related to C7)

Employees commuting to the office and back home cause a lot of traffic. Kapsch TrafficCom contributes to the sustainable behavior of its employees, for example, with environmental tips sustainability awareness campaigns, the selection of sites with public transport infrastructure nearby and/or accommodation of bike garages, showers and lockers, the participation in local mobility programs to encourage cycling or promoting

public transport and car sharing as an alternative to company cars. Workplace flexibility and collaboration tools reduce commuting in general.

Notes

- Fuel- and energy-related activities emissions (C3): Emissions related to this category depend on the corresponding Scope 1 and Scope 2 emissions. Therefore, no additional requirements are necessary to minimize this category.
- Waste generated (C5): Emissions of this category are caused by the disposal or treatment of waste generated in the office or during production. Waste generated at the office sites is comparable to domestic waste. The manufacturing sites have implemented re-usable packaging and separate collection of different types of plastic waste to enable recycling.
- Investments (C15): Kapsch TrafficCom's investments have only a minor effect on GHG emissions.
- As Scope 3 GHG categories capital goods (C2), upstream of leased assets (C8), processing of sold products (C10), downstream leased assets (C13) and franchises (C14) are either not applicable or have insignificant related GHG emissions, no corresponding sustainability requirements needed to be defined.



Legal aspects

Kapsch TrafficCom's most relevant legal obligations¹⁰ regarding environmental sustainability are:

- EU Taxonomy Regulation for Sustainable Activities¹¹
- Restriction of Hazardous Substances (RoHS)
- Registration, Evaluation and Authorization of Chemicals (REACH) Regulation
- Waste from Electric and Electronic Equipment (WEEE)
- Conflict Minerals (T3&G)
- Electromagnetic Compatibility (EMC)

The overall goals of the current environmental sustainability-related legislative framework are to:

- maximize the positive environmental impact of companies' portfolios (EU Taxonomy Regulation)
- minimize the amount of pollutant and electronic waste (RoHS, REACH, WEEE)
- decrease conflict and illegal exploitation of minerals (T3&G)
- prevent interference due to radio emissions (EMC)

¹⁰ This list does not include regional/national laws, as European environmental legislation is typically more stringent.

¹¹ Kapsch TrafficCom believes that it is able to fulfill the environmental objectives of the Taxonomy Regulation 2020/852 listed in Article 9 and the minimum safeguards listed in Article 18 of that same regulation.

Abbreviations

Abbreviation	Name
3T&G	Tin (Sn), tantalum (Ta), tungsten (W) and gold (Au)
CO ₂	Carbon dioxide
EMC	Electromagnetic compatibility
HSSEQ	Health, Safety, Security, Environment, Quality
KTC	Kapsch TrafficCom
NOx	Nitrogen monoxide, nitrogen dioxide
PM	Particulate matter
REACH	Registration, Evaluation and Authorization of Chemicals
RoHS	Restriction of Hazardous Substances
WEEE	Waste from Electric and Electronic Equipment

Disclaimer.

This document was created with care and all data has been checked conscientiously. Nevertheless, the possibility of layout and printing errors cannot be excluded.

Imprint.

Media owner and publisher: Kapsch TrafficCom AG
Place of publishing: Vienna, Austria
Editorial deadline: December 23, 2021

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Detailed environmental sustainability guideline	Kapsch TrafficCom internal document
Sustainability requirements repository	Kapsch TrafficCom internal requirements repository

Kapsch TrafficCom

Kapsch TrafficCom is a globally renowned provider of transportation solutions for sustainable mobility. Innovative solutions in the application fields of tolling, tolling services, traffic management and demand management contribute to a healthy world without congestion.

Kapsch has brought projects to fruition in more than 50 countries around the globe. With one-stop solutions, the company covers the entire value chain of customers, from components to design and implementation to the operation of systems.

As part of the Kapsch Group and headquartered in Vienna, Kapsch TrafficCom has subsidiaries and branches in more than 25 countries. It has been listed in the Prime Market segment of the Vienna Stock Exchange since 2007 (ticker symbol: KTCG). In its 2020/21 financial year, around 4,660 employees generated revenues of about EUR 500 million.

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