



## Environmental program 2023

Purpose	The environmental program serves to improve the environmental performance of our company and describes the goals, key figures and measures for implementation.
scope of application	according to DIN EN ISO 14.001:2015 and DIN EN 16247-1 (energy audit)
Responsible	environmental management
Remarks	This document is released for public use.

Approved by:

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Created: December 2022

QM/EM Department

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# 1. Our environmental policy



We, MISUMI Europa GmbH, have set ourselves the goal of using our natural resources responsibly and minimizing or avoiding the environmental impact resulting from our business activities. To improve our environmental performance, we have determined the requirements that arise from the context of our company and derived appropriate goals and measures from them. Our objectives are measurable and are regularly reviewed.

## 1.1. Obligation


As a trading company, we see particular challenges in **avoiding waste** and **packaging our products** in a way that saves resources. In our modern logistics center, we place high demands on **efficient energy consumption** and the **reduction of CO2 emissions when transporting** our products. We meet these challenges by integrating sustainability measures into the underlying business processes. The necessary financial and human resources are made available for this purpose.



Managers and employees who are tasked with contributing to the effective implementation of environmental protection measures get the support of management at all times. Appropriate communication within the company should make all employees aware of the need to handle our natural resources carefully and to support our environmental goals and contribute to their fulfillment.

To implement the environmental policy and to constantly improve our environmental performance, we have an environmental management system that is certified according to DIN EN ISO 14001 and is regularly checked by independent auditors.

In addition, an energy audit according to DIN 16247-1 takes place every 4 years, which helps to optimize our energy consumption and identify potential savings.

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		Updated on:	20/06/2023
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## 1.2. Transparency



We have decided for a high level of transparency on all sustainability issues. In addition to **protecting the environment**, this also applies to the **obligation to social and ethical issues** as well as **responsible corporate management** and **ensuring sustainable supply chains**. We have been providing information on the two recognized platforms EcoVadis and CDP.net since 2022 and have received a corresponding rating.

In addition, this year we will commit to the UNGC (United Global Compact) and SBTi (Science-based Target Initiative) initiatives to establish, track and disclose our quantitative targets on a scientific basis. In particular, the targets for reducing CO2 emissions have been created for the entire MISUMI Group with all its locations and for around 12,000 employees and are binding for every branch (see Section 2.2).

## 1.3. Responsibility

Taking responsibility means identifying issues, recognizing problems and working out solutions. We have analyzed the following topics and included them in our environmental policy.


### 1.3.1. Protection against pollution and soil contamination



Accidental and local pollution is the result of events that can occur in the course of regular business activities or as a result of an accident (e.g. fire, burst pipe, transport accident). This can have serious consequences for water, air and soil. We are aware that certain processes can lead to environmental damage if not handled properly and we do everything we can to avoid such pollution. To achieve this goal, the following principles have been established and apply to all our locations:

**Compliance with all legal requirements:** MISUMI is committed to complying with all applicable legal and regulatory requirements related to accidental pollution. We regularly review the laws and local regulations related to pollutants, waste disposal, discharge of effluent and handling of chemical substances.

**Responsible disposal:** We only use accredited waste disposal companies that are fully licensed by the responsible authorities for the disposal of waste and effluent. We organize the disposal according to the laws and local regulations. Disposal in the environment (e.g. in streams, rivers or in the ground) is strictly prohibited.

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**Prevention of spills of liquids and other substances from plants:** We carry out regular preventive maintenance measures and monitoring to avoid and, if necessary, detect early leaks in lubrication systems, emission systems, pipes, tanks, refrigeration plants, cleaning systems, effluent systems, etc.

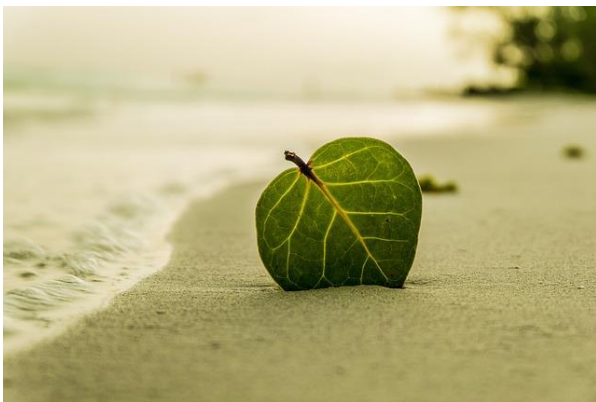
**Supporting pollution prevention initiatives:** We work with local authorities and support their pollution reduction initiatives. We share and promote these initiatives with other MISUMI locations and subsidiaries. We also make employees aware of the consequences of environmental pollution in the soil, in the air or in the water.

**Transparency on pollution impacts:** We have assessed the risks related to pollution impacts. We monitor the implementation of measures and their effectiveness and have defined responsibilities. We report possible serious incidents to the authorities and the MISUMI headquarters immediately.

**Document procedures:** We conduct regular risk assessments to identify operational areas where accidental or localized contamination could occur. We document the procedures for potentially accidental and local pollution risks and for their operational control.

**Insurance for emergencies:** We have ensured that adequate insurance is in place to cover the risks of accidental leakage or contamination, for example to cover cleaning costs, damage to the environment and legal costs.

### 1.3.2. Careful handling of water and effluent



Ensuring access to affordable, reliable and sufficient water supplies is essential. The water resources, we depend on, are shared with the people in the communities where we operate. Accordingly, we will act responsibly to protect the resource of water for others, ourselves and future generations.

#### MISUMI is therefore committed:

- To comply with all applicable laws and local regulations related to the use of water and the discharge of effluent.
- Not wasting water, avoiding pollution from effluent and continuously raising awareness among all employees.
- To continuously monitor our water consumption to identify potential savings and to act.
- Understand natural and man-made impacts on water resources, including climate change, and act within our corporate policies.
- Involve local and other relevant stakeholders, e.g. in connection with operational changes or strategic adjustments.

Measures are defined as part of our environmental program if a need for action has been identified in accordance with our commitment. Since, due to our business activities, water is only used in normal household



quantities and there are no machines or systems that require water for manufacturing processes, no dedicated water management has been implemented. Risks in dealing with extinguishing water or the discharge of effluent are named in the emergency management.

### 1.3.3. Dealing with waste responsibly



Avoiding, reusing and properly disposing of waste is critical to being environmentally responsible with our resources. Responsible handling of waste is one of our environmental goals (see Section 2.1). That is why waste is separated into paper, plastic and residual waste. Properly marked separation containers are used for this at both locations. The principle of waste avoidance also applies: Most documents are stored electronically, documents only need to be printed out if it is unavoidable from a legal or procedural point of view. If possible, packaging is used several times.

In addition to the usual household waste, the logistics site mainly produces packaging waste. These are separated according to the types of waste, residual waste, paper and plastic. Appropriately labeled containers have been placed in many work areas for this purpose. There are also separate collection areas for electronic waste and scrap metal.

Since no hazardous waste is generated at any site, there are no guidelines for this. Only old batteries accumulate in normal household quantities and are collected and taken to suitable collection points.

The waste process in logistics is documented and supplemented by instructional documents. All waste is recorded in a waste register. The use of packaging materials is also documented.

### 1.3.4. CO<sub>2</sub> Emissions



As a trading company, we do not operate any production facilities, but as part of the supply chain, we also feel obliged to contribute to reducing CO<sub>2</sub> emissions. We record our energy consumption and the associated CO<sub>2</sub> emissions for both locations.

The indirect CO<sub>2</sub> emissions caused by the freight transport of our goods, primarily from Asia, are a significant part. These CO<sub>2</sub> emissions are also recorded for air transport as well as for ship and road transport. Total emissions are disclosed.

Quantitative and scientifically verifiable targets have been set for our emissions (see sections 2.2 and 2.3).

### 1.4. Awareness

The involvement of employees and suppliers is essential for the successful implementation of the goals and measures described below.



Appropriate information and instructions are provided to make our employees particularly aware of how to save energy. In the logistics center, avoiding and separating waste will continue to be discussed.

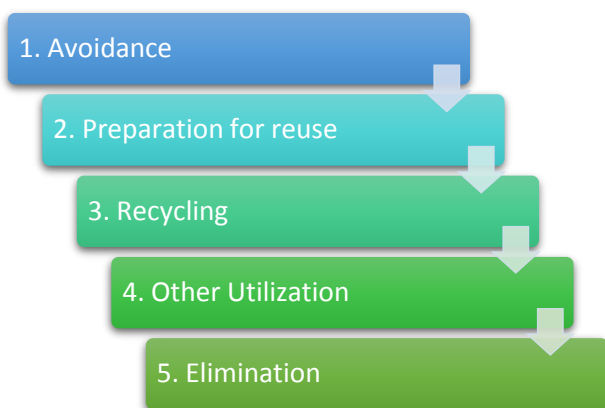
In preparation for the new Supply Chain Due Diligence Act (LKsG), our suppliers are increasingly being included in the overall sustainability management, of which environmental management plays a significant role. Our key suppliers are evaluated with regard to all ESG issues via a newly implemented application. We stand by our obligation to make our contribution to meeting the sustainability requirements.

## 2. Our goals

We regularly identify and evaluate the environmental aspects that affect our day-to-day business processes (see Appendix 1). We have identified the issues of "waste, energy and transport" as essential environmental aspects and formulated our objectives from them:

- 1) **Waste avoidance:** Optimization of packaging and consistent waste separation
- 2) **Energy efficiency:** Responsible use of energy and reduction of CO<sub>2</sub> emissions
- 3) **Reduction of fuel emissions:** optimization of our transport routes and means

### 2.1. Waste avoidance: Optimization of packaging and consistent waste separation



Our goal is to contribute to avoiding waste and not wasting resources unnecessarily. To achieve this goal, we examined our packaging management and identified a lot of optimization potential. Avoiding waste has top priority. If waste is unavoidable, reuse (upcycling) or recycling should help to conserve resources as much as possible.

#### **Waste avoidance for packaging and fillers so that waste does not arise in the first place**

In addition to stable outer packaging, high-quality filling material is required to ship our products to ensure safe shipping. Since 2018, a special paper has been used as an alternative filler for shipment of goods whose weight and composition permit. By using this filler, the number of PET foil cushions and styrofoam flakes has

been significantly reduced since 2018. Encouraged by the good experiences and positive feedback from our customers, we are now using the alternative filler in two grades: Thinner paper for light to medium-weight consignments and thicker paper for heavy shipments. PET film cushions must still be used for very heavy shipments, but these are only reused from incoming packages. Since 2020 we no longer must buy additional foil cushions. This means that we are able to completely avoid fillers made of plastic and polystyrene since the end of 2021.

*Since the conversion has been completed, no more key figures are collected and no more measures are defined.*



1- PaperJet with normal paper thickness



2- PaperJet with higher paper thickness



3- paper fillers

### **Efficient use of packaging material to reduce waste**

Every year we send around 400,000 shipments of goods to our customers. This results in a large number of packaging materials. When selecting the shipping bags, care is taken to ensure that they are FSC-certified. The packaging size is also selected so that no materials are excessively wasted. With the future recording of packaging materials in our warehouse management system (LFS), packaging quantities can be monitored very precisely and optimized if necessary. The aim is to dimension packaging in such a way that as little waste as possible is produced. In addition, suitable packaging is reused.

*The underlying metric #2 is described in Section 3 – “Our metrics”.*

*The planned measures #1 - #2 are described in section 4 - "Our measures" for the year 2023.*





4- FSC certified mailers



5- optimized packaging sizes

### ***Separate and recycle of own waste so that it can be reused in a meaningful way***

With our waste concept at the logistics site, we want to help avoid excessive waste and motivate our employees to properly separate any waste that arises. New containers for on-site separation were set up in all work areas. Waste balances are evaluated in detail as part of environmental management to achieve gradual improvements together with the disposal company. The employees were trained as part of the new waste concept and will continue to be made aware of this through regular instruction in the future. A waste separation ratio is collected and tracked to verify the target. The waste separation ratio shows how high the proportion of all waste is that is separated on site.

*The underlying metric #2 is described in Section 3 – “Our metrics”.*

*The planned measures #3 - #5 are described in section 4 - "Our measures" for the year 2023.*



6- Separation tank on site



7- separate waste presses

## 2.2. Energy efficiency: Responsible use of energy and reduction of CO<sub>2</sub> emissions

Our goal is to use energy as efficiently and sparingly as possible. By relocating our locations to a modern logistics center and an energy-efficient office building, we created an important basis for this in 2017 and 2018. We have drawn up a program for both locations to be able to take the right measures for the responsible use of energy.

CO<sub>2</sub> emissions of 42% by 2030 (compared to 2020) is planned for the entire MISUMI Group. For us in Europe, this means that we will make the same effort and reduce our own direct and indirect emissions around the target.

The necessary key figures are calculated and stored in the following overview:

Year	Reduction Target (%)	Emissions (t) Scope 2	KPI IS (g/€ Sales)	KPI TARGET (g/€ Sales)	Emissions (t) Scope 3	KPI IS (g/€ Sales)	KPI TARGET (g/€ sales)
2020	100.00%	358	3.24	3.24	10225.6	92.50	92.50
2021	95.80%	364	2.70	3.10	10733.9	79.68	88.62
2022	91.60%	332	2.40	2.97	9200	66.61	84.73
2023	87.40%			2.83			80.85
2024	83.20%			2.69			76.96
2025	79.00%			2.56			73.08
2026	74.80%			2.42			69.19
2027	70.60%			2.29			65.31
2028	66.40%			2.15			61.42
2029	62.20%			2.01			57.54
2030	58.00%			1.88			53.65

CO<sub>2</sub> Emission Reduction Target (MISUMI Group):

42% Reduction from Base Year 2020 to Target Year 2030

Emissions S3: Inbound Transport + Waste

### ***Energy-efficient office building***



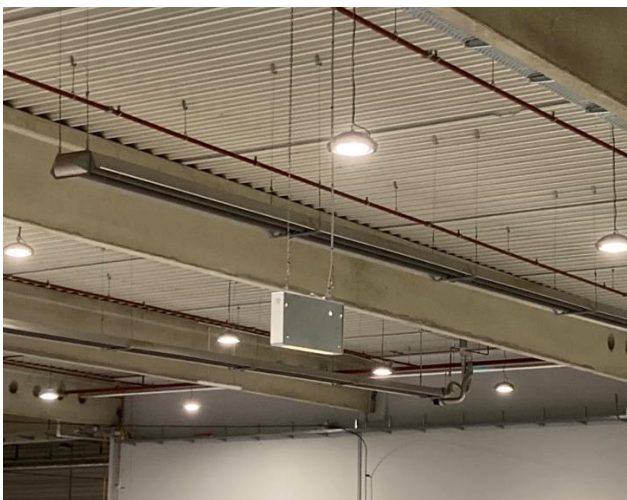
The nature of the office building, which was newly obtained in 2018, is already very energy-efficient. All rooms are equipped with LED lighting technology, and motion detectors automatically switch off the lights in all offices.

The building is cooled passively through concrete core activation. The building meets the current green building standards and is DGNB-certified. The building thus meets the standards of the German Sustainable Building Council.

### ***Modern heating technology and use of high-speed doors in our logistics center***

Our new logistics center also meets the requirements. Gas radiant heaters are characterized by a high proportion of heat that is used with acceptable exhaust gas losses. Both of our hall areas are equipped with this energy-efficient heating technology. The noiseless and fanless technology also creates a more pleasant working environment for the employees. As part of the measures to save on natural gas, the temperature in the hall areas is limited to 18°C.

Goods are delivered via roller doors. Due to the regular approach of the delivery vehicles, heat escapes unnecessarily when the roller door is opened. At the beginning of 2019, these doors were supplemented with high-speed doors, which are only opened briefly during loading and unloading. As a result, less heat escapes.



8- Gas tube heater



9- high-speed door

### ***Area-specific recording of electricity consumption in our logistics center and measures to reduce electricity consumption***

Efficient energy management is based on area-specific recording of consumption. Technical measures have enabled us since mid-2021 to record consumption in smaller areas (e.g. parts warehouse, shuttle storage system, office areas) and to derive targeted measures.



In March 2020, a reactive power compensation system was put into operation. With this, the amount of the so-called reactive power, which occurs when using AC and has no use, can be reduced. The result is the saving of electricity that is not actually used. In this way, up to 140 kW per hour can be saved, which enables financial savings of up to 25,000 euros per year and thus also significantly reduces CO<sub>2</sub>.

In 2018/19, all office areas at the logistics site were equipped with motion detectors to automatically switch off the lights. The office areas and the work areas in the warehouses were equipped with LED lighting technology by summer 2021. Finally, in 2023, the sanitary and catering areas as well as the outdoor lighting will be converted. By the end of 2023, our two locations should have been completely converted to LED lighting.

Despite the difficult situation on the electricity markets, we were able to switch the electricity supply for our logistics system for dispatch automation to green electricity at the beginning of 2023. This system requires about 50% of the total consumption that occurs in the logistics center. This enabled the CO<sub>2</sub> emissions to be reduced significantly. For 2024, the remaining areas are also to be converted to green electricity.

Another important measure should be the use of a newly installed photovoltaic system on the roof of the hall areas. This should make it possible to limit the proportion of purchased electricity to 40% from mid-2023. The majority of 60% of the required electricity is then generated emission-free directly on the roof of our logistics center.

*The underlying metric #3 is described in Section 3 – “Our metrics”.*

*The planned measures #6 - #13 (logistics) and #18 - #20 (administration) are described in section 4 - "Our measures" for the year 2023.*



10 power factor correction system



11- separate consumption recording



12- PV system (example photo)

### 2.3. Reduction of fuel emissions: optimization of our transport routes and means

Fuel emissions are caused by the transport of goods and the traffic of our employees. Especially when importing goods, we cause high fuel emissions due to long transport routes. Appropriate measures are to be taken to reduce emissions in both areas.

#### **Recording and evaluation of transport emissions**

As a trading company, a large part of the GHG emissions is caused by the transport of our products, primarily from Asia. Most of the products are currently transported by air, which leads to very high emissions. We started tracking these transport emissions on a monthly basis in 2020. At the same time, products that are stored on site are increasingly being transported by ship.

However, strengthening local production and supply chains is also essential for reducing transport emissions. It is therefore one of our strategic goals to set up production of various components within Europe or to include European manufacturers in our supplier network. This shortens the transport routes and the resulting GHG emissions are reduced.

Currently, only key figures in the area of goods receipt (inbound) are collected. Goods issue (outbound) is expected to be included from mid-2023.

*The underlying metric #4 is described in Section 3 – “Our metrics”. The planned measures #14 - #15 are described in section 4 - "Our measures" for the year 2023.*

#### **Entry into e-mobility and support for alternative mobility concepts**

In 2021, the first company vehicles were converted to emission-free battery-powered vehicles. Two fast charging stations were installed at our logistics location to enable on-site charging. The aim is to support employees in switching to e-mobility privately. Since the beginning of 2021, we have been offering all employees the opportunity to purchase a job bike on favorable terms. All employees at the logistics site receive a travel allowance if they use public transport. A job ticket has been available for the administration location since 2022.




13- Wall box at the logistics site



14- Weather-protected bicycle spaces




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### 3. Our metrics

The key figures are determined at the beginning of a financial year. Each metric is based on an operational goal that is reviewed annually. To achieve the operational goals, measures are defined, and the measures of the previous year are evaluated.

The tracking of the key figures is documented in Appendix 2. If possible, follow-up is carried out monthly by determining the corresponding figures. The results are evaluated once a year in our management review.

Environmental aspect	#	Metric	Definition	ACTUAL 2022	TARGET 2023	Operational Objective
Waste	1	<b>Waste rate per shipment</b> <i>xx kg / shipment</i>	The waste rate is determined by the total weight of all waste divided by the total number of all shipments.	0.11 kg / shipment	< 0.12 kg / shipment	Reducing the waste rate of packaging materials to reduce waste in packaging management and optimize packaging sizes
Waste	2	<b>Waste separation ratio</b> <i>xx % of separately collected fractions</i>	The waste separation ratio indicates the prescribed separation quota of 90 percent by mass. If this is not achieved, this waste is sent to a pre-treatment plant by the disposal company.	63.2% / 100% drop	> 60% / 100% waste	Increasing the waste separation ratio on site and thus reducing residual waste
energy	3	<b>GHG emissions Scope 2 (purchased electricity, heating energy, fuels)</b> <i>xx g / Euro sales</i>	The key figure is the CO <sub>2</sub> emissions per euro of sales. Long-term measures are intended to gradually reduce this rate.	2.42 g CO <sub>2</sub> e/EUR turnover	< 2.5 g CO <sub>2</sub> e/EUR turnover	Reduction of GHG emissions by 42% by 2030 (adoption of MISUMI Group target)
Traffic	4	<b>GHG emissions per delivery (kg) - Inbound (Scope 3)</b> <i>xx g / Euro sales</i>	The key figure is the CO <sub>2</sub> emissions per euro of sales. Long-term measures are intended to gradually reduce this rate.	67 g CO <sub>2</sub> e/EUR turnover	< 80 g CO <sub>2</sub> e/EUR turnover	Reduction of emissions in inbound transport through less or optimized air transport and strengthening of local production and thus shortening of transport routes
Traffic	5	<b>GHG emissions per delivery (kg) - Outbound (Scope 3)</b> <i>xx g / Euro sales</i>	The key figure is the CO <sub>2</sub> emissions per euro of sales. Long-term measures are intended to gradually reduce this rate.	xx g CO <sub>2</sub> e/EUR sales (no target figure set yet)		Reducing emissions in outbound transport by selecting carriers based on sustainability criteria


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## 4. Our measures

The following table lists all measures that are to be implemented in the coming financial year. Details of each planned action are described in Section 4.2. The measures of the previous year are evaluated in Appendix 3.

### 4.1. Planned measures

Location	Environmental aspect	Description	KPI Ref.	meeting	#
logistics	Waste	Improving packaging inventory monitoring	2	12/31/23	1
logistics	Waste	Inclusion of environmental criteria in the selection of packaging and packaging aids	2	12/31/23	2
logistics	Waste	Guidelines for employees on avoiding waste and separating (+ on-site instruction)	1	12/31/23	3
logistics	Waste	Reuse of delivered boxes for consignments of goods	2	03/31/23	4
logistics	Waste	Waste separation for lounge and office areas	2	06/30/23	5
logistics	energy	Control of the lighting in the mezzanine	3	12/31/23	6
logistics	energy	Switching the exterior lighting on the building to LED	3	12/31/23	7
logistics	energy	Guidelines for energy saving for employees (+ on-site instruction)	3	03/31/23	8th
logistics	energy	Automatic switching off from the workplaces on the QUBY	3	12/31/23	9
logistics	energy	Conversion of the canteen/sanitary room lighting to LED	3	12/31/23	10
logistics	energy	Conversion of the QUBY electricity supply contract to green electricity	3	01/31/23	11
logistics	energy	New recording of all consumers and cross-sectional technologies as part of the energy audit preparation	3	06/30/23	12
logistics	energy	Use of the installed photovoltaic system for proportionate electricity feed-in	3	12/31/23	13
logistics	Traffic	Checking of all outbound suppliers regarding CO2-neutral shipping or emissions reporting	5	06/30/23	14
logistics	Traffic	Regular monitoring of emissions data from inbound carriers	4	06/30/23	15

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Location	Environmental aspect	Description	KPI Ref.	meeting	#
Administration	Traffic	Evaluation of European suppliers including sustainability criteria	4	07/31/23	16
Administration	energy	Information on saving energy to all employees (e.g. e-mail, Office Guide, info screens)	3	04/30/23	17
Administration	energy	Check the switching times of the lighting in the office so that they can be reduced or adjusted	3	02/28/23	18
Administration	energy	Check whether radiators can be equipped with smart thermostats	3	03/31/23	19
Administration	energy	Check whether all workstations can be equipped with power strips that can be switched off	3	03/31/23	20

#### 4.2. Our measures in detail

To achieve the defined goals, measures are defined, tracked and evaluated annually. The measures for the current financial year are described below. The following structure must be observed:

- Each measure refers to the underlying environmental aspect (see Appendix 1) and the specified metric (see Section 3).
- Each measure is described in detail and - where appropriate - documented by photos or graphic representations.
- After completion, each measure is subjected to an evaluation regarding its effectiveness (see Appendix 4).

Action #1	Environmental aspect: Waste	Metric reference: 2
<p><b>Improving packaging inventory monitoring</b></p> <p>Inventory monitoring for packaging materials was set up in the LFS. This inventory monitoring can be used to track how much packaging has been used. As a result, the packaging quantities can be better monitored and, if necessary, examined regarding optimization potential.</p> <p>In the first step, the packaging quantities should be collected regularly on a monthly basis in order to determine a reliable statistical figure. The regular survey is to be carried out by the end of 2023. Active optimization measures can then begin from 2024.</p>		

Action #2	Environmental aspect: Waste	Metric reference: 2

**Inclusion of environmental criteria in the selection of packaging and packaging aids**

It is to be examined whether more environmentally friendly alternatives can be found for the following packaging aids:

- Printer rolls (FSC-certified paper, environmentally friendly adhesive coating + carrier film)
- Packing tape (environmentally friendly adhesive coating)
- Delivery note pockets (recycled film, environmentally friendly adhesive coating)
- stretch film (recycled film)
- strapping (recycled plastic)

As far as the filling material is concerned, it was possible to switch completely to paper instead of foil cushions or polystyrene as early as 2021. If paper cannot be used due to the weight, foil cushions from the packaging supplied are reused.



15- Storage area for packaging aids



16- packing tape



17- reusable slides

<b>Action #3</b>	<b>Environmental aspect: Waste</b>	<b>Metric reference: 1</b>
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**Guidelines for employees on avoiding waste and separating (+ on-site instruction)**

A guide to the proper separation of waste is to be drawn up for all employees at the logistics site . In addition, regular on-site training should take place.



18- Waste collection point (yellow=foil, blue=waste, grey=paper)

<b>Action #4</b>	<b>Environmental aspect: Waste</b>	<b>Metric reference: 2</b>
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**Reuse of delivered boxes for consignments of goods**

Delivered boxes are collected and – if suitable – reused. Currently, however, the quantities of recycled cartons are not tracked. Since the exact quantity of new packaging can be determined via the LFS, the number of shipments (boxes) can be compared with the number of new packaging (boxes). The difference then gives the number of reused boxes. The survey is scheduled to begin in April 2023.



19- Collection point reusable boxes

20- New packaging collection point

<b>Action #5</b>	<b>Environmental aspect: Waste</b>	<b>Metric reference: 2</b>
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**Waste separation for lounge and office areas**



Waste separation is not yet practiced in the lounge and office areas at the logistics site. The corresponding containers are to be purchased.

**Action #6**

**Environmental aspect: Energy**

**Metric reference: 3**

**Control of the lighting in the mezzanine**

The lighting of the shelving system (mezzanine) is currently controlled centrally in some areas using several switches. As a result, areas where no one is staying are often illuminated all the time. The energy consumption is relatively high due to the large number of lamps. By changing the circuit, it should be achieved that the employees can independently control the lighting in certain areas. For reasons of occupational safety, motion detectors are not an alternative. An automatic night shut-off is to be tested.



21- Lighting mezzanine



22- Central control of lighting

**Action # 7**

**Environmental aspect: Energy**

**Metric reference: 3**

**Switching the exterior lighting to LED**

The exterior lighting of the building has not yet been converted to LED technology. It should be checked whether a change is possible. The landlord should be involved.



23- exterior lighting



**Measure #8**

**Environmental aspect: Energy**

**Metric reference: 3**

**Guidelines for energy saving for employees (+ on-site instruction)**

A guide is to be drawn up that will make employees at the logistics site aware of how to save energy. Key points of the guide:

- Dealing with heat
- Dealing with electricity at the workplace
- Dealing with the air conditioning in the offices
- Switching off systems after work

Instruction should also take place on site. The guide should be linked to the “waste separation” guide.

**Action # 9**

**Environmental aspect: Energy**

**Metric reference: 3**

**Automatic switching off from the workplaces on the QUBY**

The devices at the packing stations (computers, monitors, printers, lighting) on the QUBY system can be switched off completely after work has ended. It should be checked whether an automatic switch-off is possible. Alternatively, the workstations could be equipped with power strips that can be switched off. The savings potential is relatively small (approx. 50 kWh per year).



24- Pack workstation

**Measure #10**

**Environmental aspect: Energy**

**Metric reference: 3**

**Conversion of the canteen/sanitary room lighting to LED**

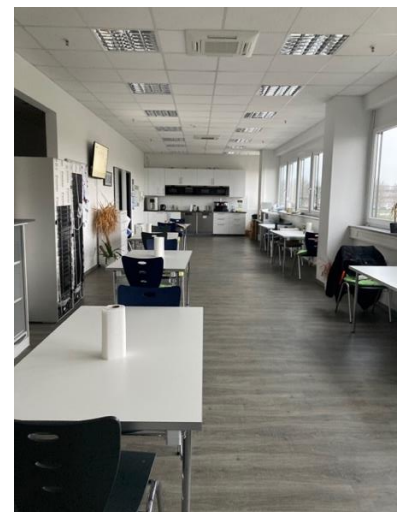
Sanitary rooms and canteen area at the logistics location have not yet been converted to LED lighting. The changeover is scheduled to take place in the course of 2023.



25- Lighting sanitary area



26- Canteen area lighting



**Action # 11**      **Environmental aspect: Energy**      **Metric reference: 3**

**Conversion of the electricity supply contract QUBY / Office to green electricity**

The electricity supply contract for the QUBY system will be converted to a term contract. Without a fixed term, the current contract does not provide a basis for a forward-looking price calculation. In addition, a switch to green electricity is to be made as part of the contract adjustment. The other electricity supply contracts (Unit 1 and Unit 2) are to be converted to green electricity from 2024. The Office location will be converted to green electricity from April.



27- Mainova ÖkoPlus option

**Action #12**      **Environmental aspect: Energy**      **Metric reference: 3**

**New recording of all consumers and cross-sectional technologies as part of the energy audit preparation**

As part of our voluntary commitment to have an energy audit carried out by an independent testing agency every 4 years, all consumers must be regularly recorded regarding their electricity requirements. In addition, the cross-sectional technologies must be documented. In preparation for the upcoming audit in 2024 (the year 2023 is taken as a basis), the data will be recorded again this year.

Gebäudekennung	Bezeichnung Verbraucher	Baujahr	Energieträger
Bitte wählen Sie hier die Objekt-Unter-der-Stichkennung aus, auf welches sich der Energieverbraucher bezieht.	Geben Sie hier bitte die exakte Bezeichnung des Energieverbrauchers an. Dazu gehört auch ggf. die Anzahl gleichartiger Verbraucher (wie bspw. Beleuchtung). Sie haben max. 100 Zeichen zur Verfügung.	Wählen Sie bitte das Baujahr des Verbrauchers aus. Sollte Ihnen das Baujahr nicht bekannt sein, wählen Sie bitte eine grobe Schätzung.	Welche Energieträger nutzt der Verbraucher? Sollte der Verbraucher mehrere Energieträger nutzen, machen Sie bitte einen jeweils einen separaten Eintrag. Beispielsweise: Strom Wärme Erdfgas
	Beleuchtung Heizung Lüftungsanlage XY Beleuchtung Halle X 100-Tr 60W		
St. Martins Tower WING	Aktivvernichter (9 x 120W)	2016	Strom Getec
St. Martins Tower WING	Access Points (20 x 100W)	2016	Strom Getec
St. Martins Tower WING	Beleuchtung Büroräume (400)	2018	Strom Getec
St. Martins Tower WING	Beleuchtung Empfang (4 x 40W)	2018	Strom Getec
St. Martins Tower WING	Beleuchtung Flurbereiche (128 Downlights)	2018	Strom Getec
St. Martins Tower WING	Beleuchtung Sanitär (104 Downlights á 2018)	2018	Strom Getec
St. Martins Tower WING	Beleuchtung Teeküchen (16 Downlights á 2018)	2018	Strom Getec
St. Martins Tower WING	Desktop PCs (26 x 100W)	2014-2020	Strom Getec
St. Martins Tower WING	Durchlauferhitzer (24 x 2000W)	2018	Strom Getec
St. Martins Tower WING	Kaffeemaschine Aquila (1 x 8600W)	2019	Strom Getec
St. Martins Tower WING	Kaffeemaschinen Guernik (6 x 2400W)	2016	Strom Getec
St. Martins Tower WING	Kaffeemaschinen Aramark (5 x 2000W)	2014	Strom Getec
St. Martins Tower WING	Klimaanlage 1 Serverraum (1 x 11.000W)	2018	Strom Getec
St. Martins Tower WING	Klimaanlage 2 Serverraum (1 x 3700W)	2017	Strom Getec
St. Martins Tower WING	Kühlschränke (10 x 90W)	2018	Strom Getec
St. Martins Tower WING	Kuvertiermaschine (1 x 600W)	2014	Strom Getec
St. Martins Tower WING	Laptops (188 x 90W)	2014-2020	Strom Getec
St. Martins Tower WING	Mikrowellengeräte (8 x 1450W)	2016	Strom Getec
St. Martins Tower WING	Monitore (375 x 21W)	2016	Strom Getec
St. Martins Tower WING	Multifunktionsdrucker C227 (5 x 1500W)	2016	Strom Getec
St. Martins Tower WING	Multifunktionsdrucker 6886 (1 x 1500W)	2016	Strom Getec
St. Martins Tower WING	Netzwerkkomponenten MPLS (16 x 100W)	2017	Strom Getec
St. Martins Tower WING	Heizkörper (240)	2014	Fernwärme
St. Martins Tower WING	Dell R620 Server (4 x 750W)	2017	Strom Getec
St. Martins Tower WING	Spülmaschinen (16 x 2000W)	2018	Strom Getec

28- Registration of consumers

**Beleuchtungssysteme Standard WING**

**Allgemeine Projektbeschreibung**

Die WING-Lösung hat ausschließlich LED-Beleuchtung der Firma Osram als Standard. Die Beleuchtung wird ausschließlich in Abhängigkeit der verfügbaren Tageslichte gesteuert. Das geschieht nachweislich, so dass die Normgemäßigkeit sichergestellt werden. Durch die automatische Steuerung per 24 Stunden werden auch die für die Leuchten erspart, was geschätzte Kosten von ca. 100.000,- € pro Jahr geschätzt werden können.

**Spezifische zu identifizieren Anlagen**

LED-Beleuchtung (21000 Stück)	21000	LED
LED-Beleuchtung (1000 Stück)	1000	LED
LED-Beleuchtung (1000 Stück)	1000	LED

**Beleuchtungssysteme Standard GET**

**Allgemeine Projektbeschreibung**

Die Beleuchtung der Halle wurde bereits überwiegend aus LED-Technik und anderen LED-Technik nach verfügbaren Leuchtstoffröhren werden. Lediglich durch LED-Technik werden in der Halle einige Leuchtstoffröhren (LED-Beleuchtung zum Einsatz, die bereits nicht geschaltet werden kann. Energieeffiziente Leuchten sind zum Einsatz, die ebenfalls die Vorteile von LED-Beleuchtung bieten. In der Halle werden weiterhin zur LED-Beleuchtung kommen HPS- Lampen zum Einsatz.

**Spezifische zu identifizieren Anlagen**

LED-Beleuchtung (1000 Stück)	1000	LED
LED-Beleuchtung (1000 Stück)	1000	LED
LED-Beleuchtung (1000 Stück)	1000	LED

29- Coverage of cross-sectional technologies

**Action # 13**

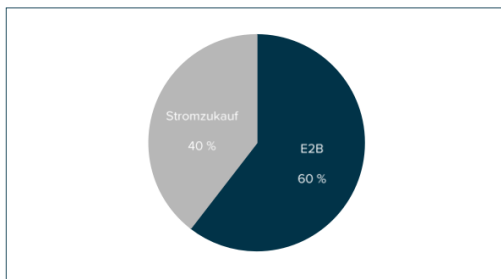
**Environmental aspect: Energy**

**Metric reference: 3**

**Use of the installed photovoltaic system for proportionate electricity feed-in**

In 2022, a new photovoltaic system was installed on the roof of the logistics halls. The operator uses the roof area to sell the electricity generated to the relevant providers. After contacting the operator, it is possible for us to purchase the electricity directly. The plant has not yet been put into operation. This is planned for Q2 2023. As soon as the system has been put into operation, the provider will contact us to discuss the contractual conditions. Subject to the contractual structure, we can then obtain approx. 60% of our annual electricity from the PV system.

jährliche Übersicht in %



→ Jährlicher Zukauf von 40 % Graustrom nötig

Überblick Stromverbrauch

	Stromverbrauch MISUMI [MWh]	Stromherstellung Solaranlage [MWh]	E2B [MWh]	Stromzukauf [MWh]
Januar	56	34	24	32
Februar	51	44	28	24
März	56	82	37	20
April	50	116	34	16
Mai	54	129	39	15
Juni	52	137	38	14
Juli	54	140	40	14
August	55	117	38	17
September	54	91	34	20
Oktober	53	56	30	23
November	52	33	24	28
Dezember	54	29	22	32
Summe	640	1.009	387	253

30- Analytical evaluation of the current load profiles

**Action #14**

**Environmental aspect: Transport**

**Metric reference: 5**

**Checking of all outbound suppliers with regard to CO2-neutral shipping or emissions reporting**



Currently, logistics mainly ships with the consignors GLS and TNT. The supply contracts must be checked regarding sustainability aspects. It should be checked and systematically recorded to what extent the providers already deliver CO2-neutrally (usually through CO2 compensation). A corresponding certificate already exists for GLS. It should also be examined how the outbound emissions can be recorded and published. We currently do not have this data.

31- Certificate from GLS



Action # 15

Environmental aspect: Transport

Metric reference: 4

Regular monitoring of emissions data from inbound carriers

The emissions data for air and sea freight transport are currently being recorded via the CO<sub>2</sub> dashboard of the Inbound Freight Monitor. However, this recording is imprecise, as further transport routes (e.g. transport to and from the airport or seaport) are not taken into account. To record Scope 3 emissions as precisely as possible, it should be checked whether these transport routes can be realistically recorded. this includes

- MISUMI transport routes from the airport or seaport
- Transport routes from the manufacturer to the airport or seaport
- Other transport routes

Dez 22	Luft	CO <sub>2</sub> e	See	CO <sub>2</sub> e	Straße	CO <sub>2</sub> e
Japan	48,9	474,8	0,5	0,2	n/a	n/a
China	7,9	71,9	1,7	0,5	n/a	n/a
Vietnam	14,5	145,9	n/a	n/a	n/a	n/a
Taiwan	0,4	3,5	n/a	n/a	n/a	n/a
Korea	0,2	2,1	n/a	n/a	n/a	n/a
Türkei	0,1	0,3	n/a	n/a	3,0	0,4
USA	0,2	1,7	n/a	n/a	n/a	n/a
	72,2	700,1	2,2	0,6	3,0	0,4

32- Current Inbound Freight Monitor

Apr 22	Luft	CO <sub>2</sub> e	See	CO <sub>2</sub> e	Straße	CO <sub>2</sub> e
Japan	67,3	654,4	6,5	2,0	n/a	n/a
China	6,1	56,0	3,8	1,1	n/a	n/a
Vietnam	15,3	153,9	n/a	n/a	n/a	n/a
Taiwan	0,6	5,9	n/a	n/a	n/a	n/a
Korea	0,0	0,1	n/a	n/a	n/a	n/a
Türkei	0,6	1,2	n/a	n/a	0,5	0,1
USA	3,7	26,4	n/a	n/a	n/a	n/a
	93,7	897,7	10,2	3,1	0,5	0,1

Okt 22	Luft	CO <sub>2</sub> e	See	CO <sub>2</sub> e	Straße	CO <sub>2</sub> e
Japan	55,4	538,1	7,8	2,4	n/a	n/a
China	0,0	0,0	0,4	0,1	n/a	n/a
Vietnam	13,1	131,4	n/a	n/a	n/a	n/a
Taiwan	0,3	2,7	n/a	n/a	n/a	n/a
Korea	0,4	3,4	n/a	n/a	n/a	n/a
Türkei	0,0	0,0	n/a	n/a	1,1	0,2
USA	0,1	0,9	n/a	n/a	n/a	n/a
	69,2	676,4	8,2	2,5	1,1	0,2


Mai 22	Luft	CO <sub>2</sub> e	See	CO <sub>2</sub> e	Straße	CO <sub>2</sub> e
Japan	75,9	737,4	4,4	1,4	n/a	n/a
China	7,7	70,0	0,0	0,0	n/a	n/a
Vietnam	18,5	186,4	n/a	n/a	n/a	n/a
Taiwan	0,5	4,9	n/a	n/a	n/a	n/a
Korea	0,1	0,6	n/a	n/a	n/a	n/a
Türkei	0,7	1,5	n/a	n/a	0,0	0,0
USA	0,2	1,3	n/a	n/a	n/a	n/a
	103,5	1002,0	4,4	1,4	0,0	0,0

Nov 22	Luft	CO <sub>2</sub> e	See	CO <sub>2</sub> e	Straße	CO <sub>2</sub> e
Japan	45,4	440,7	5,8	1,8	n/a	n/a
China	0,0	0,0	0,0	0,0	n/a	n/a
Vietnam	12,3	124,2	n/a	n/a	n/a	n/a
Taiwan	0,7	6,5	n/a	n/a	n/a	n/a
Korea	0,6	5,2	n/a	n/a	n/a	n/a
Türkei	0,0	0,0	n/a	n/a	6,0	0,8
USA	0,2	1,2	n/a	n/a	n/a	n/a
	59,1	577,9	5,8	1,8	6,0	0,8

Flugrouten	from	to	km	kg/tkm	G <sub>wp</sub>
TYO	FRA		9.456,0	0,265	3,88
PVG	FRA		8.953,0	0,263	3,88
SGN	FRA		9.752,0	0,266	3,88
TPE	FRA		9.460,0	0,265	3,88
ICN	FRA		8.639,0	0,262	3,88
IST	FRA		1.934,0	0,275	3,88
ORD	FRA		7.066,0	0,257	3,88

Microsoft Office User:  
Spezifischer Energieverbrauch E von aus-gewählten Flugzeugtypen in kg Kerosin pro tkm in Abhängigkeit von der Flugstrecke, siehe "Berechnung von Treibhausgas-emissionen in Spedition und Logistik gemäß DIN EN 16258", Seite 50

Microsoft Office User:  
Faktoren für die Berechnung des Energieverbrauchs und der Treibhausgas-emissionen, siehe "Berechnung von Treibhausgasemissionen in Spedition und Logistik gemäß DIN EN 16258", Seite 28

	<b>Environmental program with measures</b>	creation date:	05/12/2022
		Updated on:	20/06/2023
		Department:	QM/UM

<b>Action # 16</b>	<b>Environmental aspect: Transport</b>	<b>Metric reference: 4</b>
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**Evaluation of European suppliers including sustainability criteria**

For the inclusion of European suppliers (non-trade and trade), the most important suppliers should be included in an evaluation that also takes sustainability aspects into account. The QUIUB SCORE tool is used for this. In the first step, a maximum of 50 suppliers should be selected and surveyed. This is followed by an evaluation of these suppliers. The results flow into our own sustainability reporting at EcoVadis. The next reporting period starts in May 2023.



33- Tool for supplier evaluation: QUIUB SCORE

<b>Measure #17</b>	<b>Environmental aspect: Energy</b>	<b>Metric reference: 3</b>
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**Information on saving energy to all employees (e.g. e-mail, Office Guide, info screens)**

The employees at the administration site should be made more aware of how to save energy. The following measures are planned:

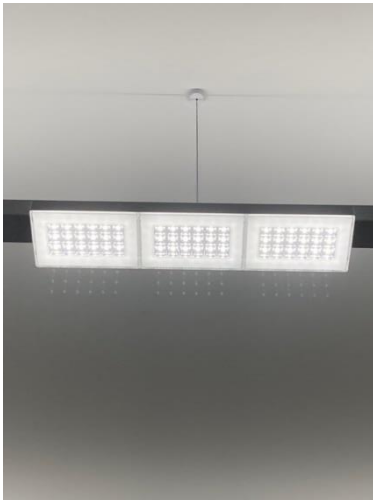
- Info e-mail to all employees of the administration site with authorization by the GF
- Presentation slides for the InfoScreens
- Information in the QM Sharepoint
- Information in the QM newsletter at regular intervals

**Action # 18**

**Environmental aspect: Energy**

**Metric reference: 3**

**Check the switching times of the lighting in the office so that they can be reduced or adjusted.**



As part of the conversion of the offices, it should be checked whether the switching times for the lighting can be adjusted (Zumtobel company). Employees should also be made aware that the light should be switched off manually after leaving offices or meeting rooms.

The current after-effects of the lighting are 15 minutes. They can be shortened to 5 minutes, but then the lights will turn off quickly if there is little to no movement in the room. Therefore, the after-effect should be left at 15 minutes. Employees are instructed to switch off the lighting manually when leaving a room.

*34- ceiling lighting*

**Action #19**

**Environmental aspect: Energy**

**Metric reference: 3**

**Check whether radiators can be equipped with smart thermostats.**

As part of the conversion measures (or afterwards), it should be checked whether all radiators can be equipped with thermostats that can be programmed and, for example, turn down the radiators. It is currently the case that radiators run at maximum power at night because the thermostats are not turned down after work. Consultation with the administration has shown that the thermostats can be replaced, but the costs must be borne by yourself.



*35- radiators with conventional thermostats*

It should be checked whether all workstations at the administration location can be equipped with power strips that can be switched off. The employees can then switch off all devices with a switch after work. Many devices currently remain switched on in stand-by mode, which leads to a considerable increase in electricity consumption given the large number of devices.



36- Workplace in the home zone

**Action # 20**

**Environmental aspect: Energy**

**Metric reference: 3**

**Check whether all workstations can be equipped with power strips that can be switched off.**

It should be checked whether all workstations at the administration location can be equipped with power strips that can be switched off. The employees can then switch off all devices with a switch after work. Many devices currently remain switched on in stand-by mode, which leads to a considerable increase in electricity consumption given the large number of devices.



37- Workplace in the home zone



## Appendix 1 – Environmental Aspects Assessment

The environmental aspects are reassessed annually. First of all, the environmentally relevant activities for each location are listed and examined with regard to their *input and output*. *Input* stands for resources that are consumed; *output* stands for environmental impacts. Every input and output affect the environment and is evaluated according to 5 criteria (the evaluation criteria are described below).


The result of the evaluation determines the priorities for action:

0	There is currently no need for action.
5	It must be checked whether there is a need for action. Measures can be planned for the medium to long term.
10	There is an urgent need for action. Corrective measures must be implemented at short notice. Preventive measures can be planned in the medium to long term.

The environmental impact or impact can be reduced or substituted by suitable measures. The measures referred to here are set out in detail in Section 4 for the current financial year.

Location and environmentally relevant activity	input / output	Environmental impact	Evaluation					Action reference
			1	2	3	4	5	
<b>Location Office / WING:</b>  Administrative processes (supplier management, customer service, sales and marketing, product purchasing, IT, compliance, finance, human resources)	Power consumption general (input)	Resource consumption (electricity, indirect CO2)	0	0	0	0	0	No action required at the moment
	heat consumption (input)	Resource consumption (district heating, indirect CO2)	0	0	0	0	0	No action required at the moment
	Fuel consumption by vehicle fleet (input)	Resource consumption (fuel, indirectly CO2) and avoidable exhaust emissions	0	0	0	0	0	No action required at the moment
	water consumption (input)	Resource consumption (water)	0	0	0	0	0	No action required at the moment
	Noise and Noise (Output)	noise emissions e.g. B. Traffic noise, printer noise, noise from conversations in open-plan offices	0	0	0	0	0	No action required at the moment
<b>Both locations:</b>  Operation of IT equipment (PCs, screens, printers, servers, data backup, etc.)	Power consumption (input) for IT equipment	Resource consumption (electricity, indirect CO2)	0	5	0	5	5	No measures are currently planned
	Waste from e-waste (input)	Avoidable waste emissions from electronic waste and possible pollutants	0	5	0	5	0	No measures are currently planned
<b>Location logistics:</b>	Power consumption (input) without IT equipment	Resource consumption (electricity, indirect CO2)	0	5	0	5	5	#6 to #13

Location and environmentally relevant activity	input / output	Environmental impact	Evaluation					Action reference
			1	2	3	4	5	
Task: Logistics processes (delivery of merchandise, storage and shipping)	heat consumption (input)	Resource consumption (gas, indirectly CO2)	0	5	0	5	5	No measures are currently planned
	water consumption (input)	Resource consumption (water)	0	0	0	0	0	No action required at the moment
	Fuel consumption by incoming and outgoing transport (input)	Inbound: consumption of resources during transport: long transport routes by air or sea freight (indirect environmental aspect)	0	5	0	5	5	#14 to #16
	Effluent and extinguishing water (output)	Possibly soil contamination	0	0	0	0	0	No action required at the moment
	Waste generation in general (output)	Negative environmental impacts due to high levels of waste or poor separation	0	5	5	5	0	#3 to #5
	Waste generated by packaging (output)	Resource consumption: High output of packaging materials and fillers	0	5	5	5	0	#1 and 2
	Noise (output)	noise emissions e.g. B. traffic noise, noise from machinery and equipment	0	5	0	0	0	No measures are currently planned
<b>Location logistics:</b> Operation of a system for dispatch automation (QUBY)	Power consumption general (input)	Avoidable resource consumption (electricity)	0	5	0	5	5	#8 and #9
	Compressed air by compressors (output)	Avoidable resource consumption (electricity)	0	0	0	0	0	No action required at the moment
<b>Location logistics:</b> Operating a shelving system (mezzanine)	Power consumption by lighting (input)	Avoidable resource consumption (electricity)	0	5	0	5	5	#6 and #8


	<b>Environmental program with measures</b>	creation date:	05/12/2022
		Updated on:	20/06/2023
		Department:	QM/UM

**Evaluation criteria:**






1 - Compliance with Binding Commitments			
10 - high priority		5 - medium priority	0 - low priority
Legal and other obligations are <b>not met</b> , <b>criminal relevance</b>		Legal and other obligations are <b>not met</b> , legal consequences are possible under the law on <b>administrative offences</b>	Legal and other obligations are <b>complied with</b> or there is <b>no obligation</b> regarding the environmental aspect
Measures are mandatory		no need for action	
2 - Severity of environmental impact			
IN/OUT	10 - high priority	5 - medium priority	0 - low priority
current in general	No monitoring of power consumption, no measures defined for potential savings	Electricity consumption is monitored sporadically and not by area, the search for potential savings is based solely on economic considerations	Monitoring of electricity consumption is carried out systematically and area-oriented, potential savings are regularly sought and improvement measures are developed
electricity for lighting	Little or no LED lighting	Lighting converted to >40% to LED	Lighting converted to >80% to LED
Power for IT equipment	All IT equipment that is not in use runs in "standby mode" and is not switched off. However, the indirect environmental impact is relevant.	Approximately 50% of the IT devices that are not in use run in "standby mode" and are not switched off. However, the indirect environmental impact is relevant.	Automatic shutdown of unused IT equipment. The IT devices at the workstations are switched off after the end of the shift, e.g. B. by switchable socket strips.
heat in general	Heating is not controlled or only sporadically, no monitoring of heat consumption, no measures for potential savings defined	Heating is controlled manually, heat consumption is monitored sporadically, the search for potential savings is based exclusively on economic considerations	Heating is controlled according to need and area, the heat consumption is monitored systematically, potential savings are regularly sought and improvement measures are developed
Fuel for vehicle fleet	No recognizable administration of the vehicle fleet, no examination of alternative drive and traffic concepts, existing vehicles with combustion engines just meet the legally permissible emission standards, CO2 emissions are not determined.	The vehicle fleet is managed manually but systematically, alternative drive and traffic concepts are only checked sporadically, existing vehicles with combustion engines are state-of-the-art and meet the legally permissible emission standards, CO2 emissions are determined sporadically.	There are professional tools for managing the vehicle fleet, alternative drive and traffic concepts are systematically checked and implemented if necessary, existing vehicles with combustion engines are state-of-the-art and meet the latest exhaust gas standards, CO2 emissions are systematically determined.
fuel for transport	CO2 emissions are not determined, alternative transport options are not used, and alternative delivery concepts are irrelevant	CO2 emissions are determined sporadically, the search for transport alternatives is based exclusively on economic considerations, alternative delivery concepts are not strategically planned	CO2 emissions are determined regularly, transport alternatives are regularly searched for, strategic projects on alternative delivery concepts are initiated
waste in general	Waste storage areas not suitable. Storage of waste containers on unpaved ground. Leaks and overfilling lead to soil and possibly groundwater contamination with pollutants. No documented checks by the waste manager.	Waste storage areas suitable to a limited extent. Storage of waste containers on solid ground with "bone stones", ie not liquid-tight. Leaks and overfilling are recognizable. Soil and groundwater contamination with pollutants cannot be ruled out.	Waste - suitable storage areas. Even in the event of a leak, it is not possible for pollutants to penetrate the ground. Stringent controls by the waste officer are verifiable.

IN/OUT	10 - high priority	5 - medium priority	0 - low priority
E-waste waste	Volume >5% of total waste. Disposal measure is not suitable. Transport to African countries plus improper recycling with significant emissions to the environment.	Between 5% and 2% of the total waste Disposal measure in Germany is not suitable. Improper recycling with significant emissions to the environment.	Volume <2% of total waste Disposal measure is suitable. The recycling is carried out professionally according to the "state of the art" with responsible emissions into the environment.
waste from packaging	The shipping of products and waste results in avoidable environmental impacts (e.g. loss of resources in packaging materials, pollutant inputs into the environment, exhaust emissions from means of transport or unfavorable transport routes)	The shipping of products and waste results in environmental impacts that can be reduced through process optimization.	The shipping of products and waste does not result in any negative environmental impact.
Noise	very high noise level with consequential damage to health (physical and psychological) with the need for immediate remedial action	Temporarily high noise level with the need for a medium-term remedy or suitable protective measures	Noise level in the normal range without permanent impairments
Water	Very high water consumption	Above average water consumption	Average water consumption in normal household quantities
sewage	high risk of soil contamination from extinguishing/dirty water	average risk of soil contamination from fire-fighting/waste water	no risk of soil contamination from fire-fighting/waste water
compressed air	There are no studies on alternative types of energy or process optimization (e.g. local pressure boosting units) and their energetic balance. Leaks often occur in the network. Internal friction losses are not evaluated. The available pressure levels are not evaluated for obviousness. There is no "consumption data" on the subject of compressed air. The electricity consumption that correlates with this is high, and the indirect environmental impacts are relevant (e.g. CO2 emissions).	There are no studies on alternative types of energy or process optimization and their energetic balance. There are occasional leaks in the network. Internal friction losses are evaluated, but unavoidable or their optimization would cause high costs. The available pressure levels are evaluated for obviousness. There is no "consumption data" on the subject of compressed air. The electricity consumption that correlates with this is high, and the indirect environmental impacts are relevant (e.g. CO2 emissions).	There are studies on alternative types of energy or process optimization and their energetic balance. There are no leaks in the network. Internal friction losses are evaluated and unavoidable or their optimization would cause high costs. The available pressure levels are evaluated for obviousness. The "consumption data" on the subject of compressed air are measured and documented for each system or area.
	Measures are mandatory	Check if action is required	no need for action
<b>3 - Interested Parties</b>			
	<b>10 - high priority</b>	<b>5 - medium priority</b>	<b>0 - low priority</b>
	e.g. B. critical neighbors who have already lodged complaints or authorities who have sent environmental decisions in the last year	e.g. B. Inquiries from banks on environmental issues in the context of lending. Inquiries from stakeholders on environmental issues. Customer inquiries about the substance content of products, etc.	e.g. B. Employee questions about environmental issues - without reference to environmental problems at the site. External inquiries on general environmental issues
	Measures are mandatory	Check if action is required	no need for action
<b>4 - suggestibility</b>			
	<b>10 - high priority</b>	<b>5 - medium priority</b>	<b>0 - low priority</b>
	Very good influenceability in terms of a short-term (within 1 year) realizable goal	Very good ability to be influenced in terms of a medium-term (within 2 years) realizable goal	No target formulations possible / recognizable without further research
	It is imperative to formulate goals that can be achieved in the short term	Check whether goals are useful or necessary	no target formulation possible
<b>5 - Economic aspects</b>			
	<b>10 - high priority</b>	<b>5 - medium priority</b>	<b>0 - low priority</b>
	Savings possible immediately or amortization of measures within 2 years	Savings possible within the next year or amortization within 4 years	no direct savings possible or amortization > 5 years
	Measures are mandatory	Check if action is required	no need for action



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## Appendix 2 – Evaluation of the metrics 2022

Envi-ron-mental aspect	#	Metric	ACTUAL 2020	ACTUAL 2021	ACTUAL 2022	TARGET 2023	Rating 2022
Waste	1	Waste rate per shipment <i>xx kg / shipment</i>	0.2kg/shipment	0.16 kg / shipment	0.11 kg / shipment	< 0.12 kg / shipment	 less waste in 2022 with the higher volume of shipments
Waste	2	Waste separation ratio <i>xx % of separately collected fractions</i>	45.5% / 100% waste	49.1% / 100% drop	63.2% / 100% drop	> 60% / 100% waste	 Higher waste separation ratio for an improved waste concept
energy	3	GHG emissions Scope 2 (purchased electricity, heating energy, fuels) <i>xx g / euro sales</i>	3.24 g CO <sub>2</sub> e/EUR turnover	2.7 g CO <sub>2</sub> e/EUR turnover	2.42 g CO <sub>2</sub> e/EUR turnover	< 2.5 g CO <sub>2</sub> e/EUR turnover	 Reduction of CO <sub>2</sub> emissions with only a moderate increase in sales
Traffic	4	GHG emissions per delivery (kg) - In-bound (Scope 3) <i>xx g / Euro sales</i>	92 g CO <sub>2</sub> e/EUR turnover	80 g CO <sub>2</sub> e/EUR turnover	67 g CO <sub>2</sub> e/EUR turnover	< 80 g CO <sub>2</sub> e/EUR turnover	 Reduction of CO <sub>2</sub> emissions with only a moderate increase in sales
Traffic	5	GHG emissions per delivery (kg) - Out-bound (Scope 3) <i>xx g / Euro sales</i>	xx g CO <sub>2</sub> e/EUR sales (no target figure set yet)				 Tracking could not be implemented in 2022 either.



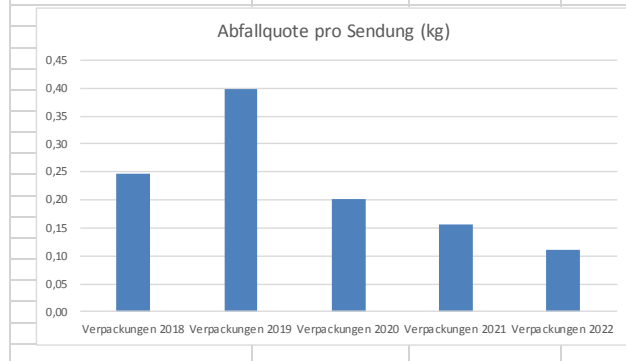
**Environmental program with measures**

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Abfallquote bei Verpackungen											
Verpackungsart	Gewicht pro Stück (kg)	Verpackungen 2018	in kg	Verpackungen 2019	in kg	Verpackungen 2020	in kg	Verpackungen 2021	in kg	Verpackungen 2022	in kg
Kartonagen (kg)	0,3	239.000	71.700	245.000	73.500	250.000	75.000	245.000	91.268	304.228	91.268
Versandtaschen (kg)	0,1	137.325	13.733	147.529	14.753	151.438	15.144	147.901	14.790	136.709	13.671
Versandetiketten (kg)	0,05	376.325	18.816	392.529	19.626	401.438	20.072	392.901	19.645	440.937	22.047
Füllstoffe (qm)	0,08	1.320	106	81.221	6.498	82.054	6.564	82.000	6.560	138.907	11.113
	Anzahl der Sendungen	376.325		392.529		401.438		392.901		440.937	
	Abfälle gesamt (kg)		93.100		156.560		81.200		60.920		49.330
	Verpackungsquote pro Sendung (kg)		0,28		0,29		0,29		0,34		0,31
	<b>Abfallquote pro Sendung (kg)</b>		<b>0,25</b>		<b>0,40</b>		<b>0,20</b>		<b>0,16</b>		<b>0,11</b>



Source: [2023 Environmental Program KPI Tracking.xlsx](#)

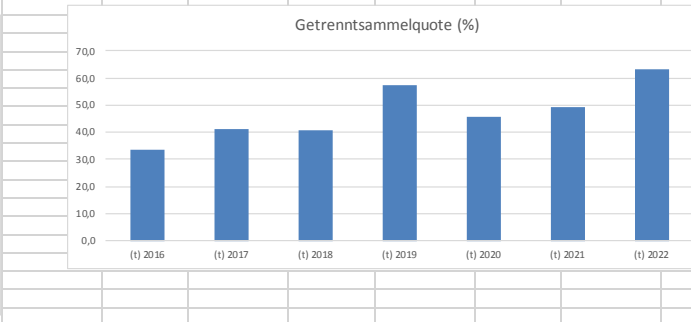
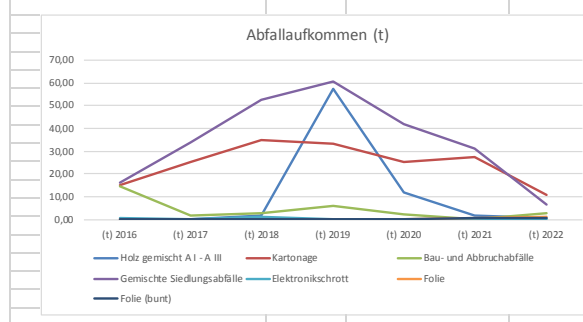


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Abfallbilanz und Trennquote

Abfallart	AVV	Erklärung	(t) 2016	t (CO <sub>2</sub> e) 2016	(t) 2017	t (CO <sub>2</sub> e) 2017	(t) 2018	t (CO <sub>2</sub> e) 2018	(t) 2019	t (CO <sub>2</sub> e) 2019	(t) 2020	t (CO <sub>2</sub> e) 2020	(t) 2021	t (CO <sub>2</sub> e) 2021	(t) 2022	t (CO <sub>2</sub> e) 2022
Holz gemischt A I - A III	170201	Recycling	0,00	0,00	0,00	0,00	1,86	0,65	57,14	20,00	11,94	4,18	1,42	0,50	1,50	0,53
Kartonage	200101	Recycling	14,88	5,21	24,98	8,74	35,06	12,27	33,07	11,57	25,00	8,75	27,34	9,57	25,64	8,97
Bau- und Abbruchabfälle	170904	Vorbehandlung	14,24	4,98	1,64	0,57	2,78	0,97	5,78	2,02	2,42	0,85	0,00	0,00	3,94	1,38
Gemischte Siedlungsabfälle	200301	Vorbehandlung	16,21	5,67	34,05	11,92	52,48	18,37	60,57	21,20	41,76	14,62	31,01	10,85	14,19	4,97
Elektronikschrott	160214	Recycling	0,54	0,19	0,00	0,00	0,92	0,32	0,00	0,00	0,00	0,00	0,26	0,09	0,00	0,00
Folie	150102	Recycling	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,59	0,21	1,97	0,69
Folie (bunt)	150102	Recycling	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,30	0,11	1,43	0,50
Folie (transparent)	150102	Recycling	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,66	0,23
		Vorbehandlung	30,45		35,69		55,26		66,35		44,18		31,01		18,13	
		Recycling	15,42		24,98		37,84		90,21		36,94		29,91		31,20	
		<b>Vorbehandlungsquote:</b>	<b>66,4</b>		<b>58,8</b>		<b>59,4</b>		<b>42,4</b>		<b>54,5</b>		<b>50,9</b>		<b>36,8</b>	
		<b>Getrennsammelquote:</b>	<b>33,6</b>		<b>41,2</b>		<b>40,6</b>		<b>57,6</b>		<b>45,5</b>		<b>49,1</b>		<b>63,2</b>	
		<b>Emissionen (t CO<sub>2</sub>e):</b>		<b>5,7</b>		<b>11,9</b>		<b>18,4</b>		<b>21,2</b>		<b>14,6</b>		<b>10,9</b>		<b>5,0</b>



Source: [2023 Environmental Program KPI Tracking.xlsx](#)



## Environmental program with measures

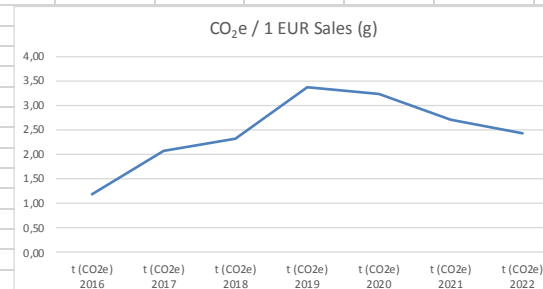
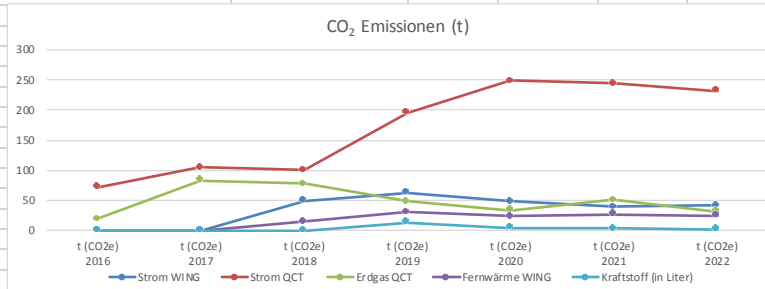
creation date: 05/12/2022

Updated on: 20/06/2023

Department: QM/UM

### THG Emissionen (Scope 2)

Verbraucher	Faktor (t/MWh o. TKM)	(kWh/ltr) 2016	t (CO <sub>2</sub> e) 2016	(kWh/ltr) 2017	t (CO <sub>2</sub> e) 2017	(kWh/ltr) 2018	t (CO <sub>2</sub> e) 2018	(kWh/ltr) 2019	t (CO <sub>2</sub> e) 2019	(kWh/ltr) 2020	t (CO <sub>2</sub> e) 2020	(kWh/ltr) 2021	t (CO <sub>2</sub> e) 2021	(kWh/ltr) 2022	t (CO <sub>2</sub> e) 2022
Strom WING	0,499	0	0	0	0	99.602	50	124.763	62	96.432	48	78.076	39	83.193	42
Strom QCT	0,352	203.404	72	296.348	104	283.876	100	557.108	196	708.168	249	694.623	245	661.057	233
Erdgas QCT	0,247	74.743	18	336.232	83	314.246	78	193.572	48	133.344	33	204.071	50	126.230	31
Fernwärme WING	0,27	0	0	0	0	52.608	14	110.100	30	86.064	23	97.885	26	91.740	25
Kraftstoff (in Liter)	0,266	0	0	0	0	0	0	4.887	13	1.632	4	1.210	3	693	2
<b>CO<sub>2</sub>e Emissionen gesamt (t):</b>			<b>90</b>		<b>187</b>		<b>241</b>		<b>349</b>		<b>358</b>		<b>364</b>		<b>332</b>
<b>CO<sub>2</sub>e / 1 EUR Sales (g)</b>			<b>1,20</b>		<b>2,08</b>		<b>2,33</b>		<b>3,37</b>		<b>3,24</b>		<b>2,70</b>		<b>2,42</b>



Microsoft Office User:  
entspricht 11.895 kWh (1211:7,4  
ltr/100km=163,64\*72,69 kWh (Referenzwert für Diesel  
pro 100 km) = 11.895 kWh)

Source: [2023 Environmental Program KPI Tracking.xlsx](#)



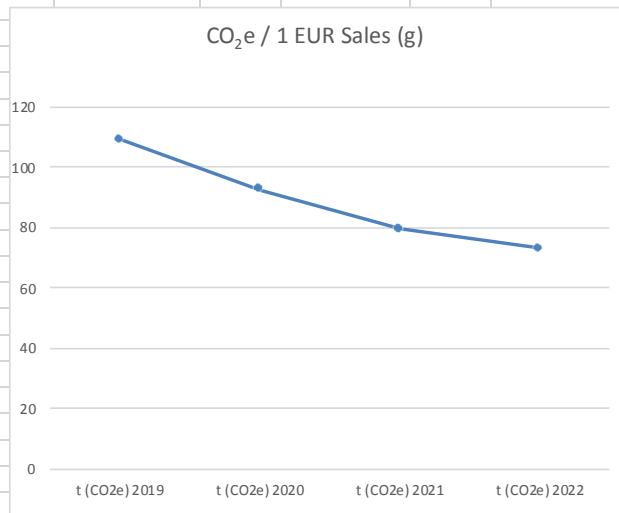
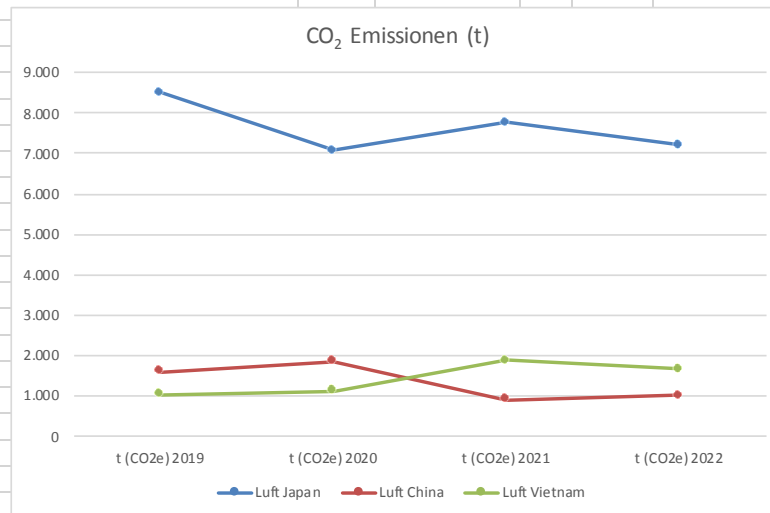


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THG Emissionen (Scope 3 - Inbound Transport)

Inbound Transport	km	kg/TKM o. TEU	G <sub>w</sub>	(t) 2019	t (CO <sub>2</sub> e) 2019	(t) 2020	t (CO <sub>2</sub> e) 2020	(t) 2021	t (CO <sub>2</sub> e) 2021	(t) 2022	t (CO <sub>2</sub> e) 2022
Luft Japan	9456	0,264824	3,88	875	8.498	729	7.079	800	7.769	741	7.197
Luft China	8953	0,262812	3,88	175	1.597	204	1.859	101	925	111	1.016
Luft Vietnam	9752	0,266008	3,88	105	1.053	113	1.138	188	1.892	167	1.679
Luft Taiwan	9460	0,26484	3,88	6	58	5	45	7	63	6	59
Luft Korea	8639	0,261556	3,88	2	19	2	16	1	11	2	21
Luft Türkei	1934	0,275244	3,88	6	12	11	22	9	19	9	19
Luft USA	7066	0,256665	3,88	2	16	2	14	2	13	2	13
See Japan	20775	0,0044	3,41	73	23	84	26	62	19	46	14
See China	19408	0,0044	3,41	19	6	2	1	18	5	16	5
Straße Türkei	1867	0,023	3,24	16	2	69	10	34	5	22	3
<b>CO<sub>2</sub>e Emissionen gesamt (t):</b>				<b>1.279</b>	<b>11.282</b>	<b>1.219</b>	<b>10.211</b>	<b>1.221</b>	<b>10.723</b>	<b>1.123</b>	<b>10.028</b>
<b>CO<sub>2</sub>e / 1 EUR Sales (g)</b>					<b>109</b>		<b>92</b>		<b>80</b>		<b>73</b>
<b>CO<sub>2</sub>e / Shipment (kg)</b>					<b>28,74</b>		<b>25,44</b>		<b>27,29</b>		<b>25,52</b>

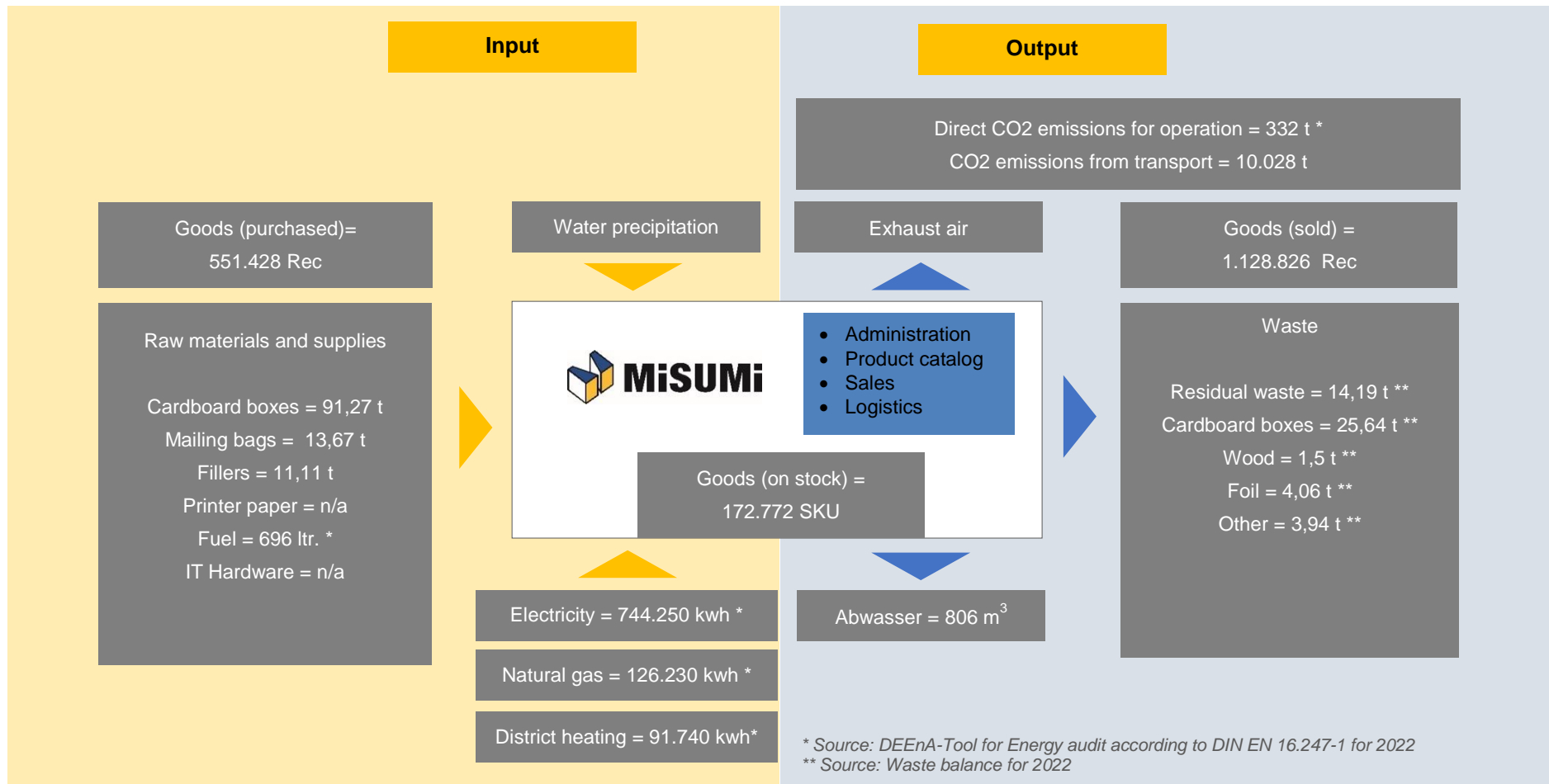



Source: [2023 Environmental Program KPI Tracking.xlsx](#)

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### Appendix 3 – Material flows in 2022


The following overview contains the qualitative and quantitative input-output of the material flows in relation to the 2022 financial year. The absolute consumption figures are derived.



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## Appendix 4 – Evaluation of the measures in 2022

#	Location	Environmental aspect	Description	Deadline	Costs	Responsible	status	Evaluation
1	logistics	Waste	Regular waste monitoring through quarterly statistics	2022	0.00	QM/EM	completed	 <p>The reports are made available quarterly by the disposal company.</p>
2	logistics	Waste	Regular audit of the waste process and on-site controls	2022	0.00	QM/EM	completed	 <p>The process is checked on a quarterly basis. Deviations are logged.</p>
3	Administration	Waste	Switching from paper invoices to electronic invoicing	2022	5,000.00	User Services	completed	 <p>The proportion of electronic invoices is currently xx% and is determined regularly.</p>
4	logistics	energy	Timing control for roof vents	2022	1,000.00	Logistics	completed	 <p>A time control was installed.</p>
5	logistics	energy	Application for electricity tax refund according to §10 Electricity Tax Act	2022	0.00	QM/EM	completed	 <p>As a non-manufacturing company, MISUMI is not entitled to reimbursement.</p>
6	logistics	energy	Completion of the maintenance lighting in QUBY for reasons of occupational safety	2022	5,000.00	Logistics	completed	 <p>The maintenance lighting has been completed.</p>
7	Administration	Traffic	Introduction of a job ticket for employees and a travel allowance when using public transport	2022	20,000.00	MR	completed	 <p>Job tickets for the administration location have been introduced, the employees at the logistics location receive a travel allowance.</p>

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## Appendix 5 - Follow-up of measures in 2023

#	Location	Environmental aspect	Description	Deadline	Costs	Responsible	status	Evaluation
1	logistics	Waste	Improving packaging inventory monitoring	12/31/23		Logistics	In progress	
2	logistics	Waste	Inclusion of environmental criteria in the selection of packaging and packaging aids	12/31/23		Logistics	In progress	
3	logistics	Waste	Guidelines for employees on avoiding waste and separating (+ on-site instruction)	12/31/23		QM/EM	In progress	
4	logistics	Waste	Reuse of delivered boxes for consignments of goods	03/31/23		Logistics	In progress	
5	logistics	Waste	Waste separation for lounge and office areas	06/30/23		Logistics	In progress	
6	logistics	energy	Control of the lighting in the mezzanine	12/31/23		Logistics	In progress	
7	logistics	energy	Switching the exterior lighting on the building to LED	12/31/23		Logistics	In progress	
8th	logistics	energy	Guidelines for energy saving for employees (+ on-site instruction)	03/31/23		QM/EM	In progress	
9	logistics	energy	Automatic switching off of the workplaces on the QUBY	12/31/23		Logistics	In progress	



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10	logistics	energy	Conversion of the canteen/sanitary room lighting to LED	12/31/23		Logistics	In progress	
11	logistics	energy	Conversion of the QUBY electricity supply contract to green electricity	01/31/23	0.00	QM/EM	completed	 Electricity contract was changed.
12	logistics	energy	New recording of all consumers and cross-sectional technologies as part of the energy audit preparation	06/30/23		QM/EM	In progress	
13	logistics	energy	Use of the installed photovoltaic system for proportionate electricity feed-in	12/31/23		QM/EM	In progress	
14	logistics	Traffic	Checking of all outbound suppliers with regard to CO2-neutral shipping or emissions reporting	06/30/23		QM/EM	In progress	
15	logistics	Traffic	Regular monitoring of emissions data from inbound carriers	06/30/23		QM/EM	In progress	
16	Administration	Traffic	Evaluation of European suppliers including sustainability criteria	07/31/23		QM/EM	In progress	
17	Administration	energy	Information on saving energy to all employees (e.g. e-mail, Office Guide, info screens)	04/30/23		QM/EM	In progress	
18	Administration	energy	Check the switching times of the lighting in the office so that they can be reduced or adjusted	02/28/23	0.00	QM/EM	completed	 Switching times were checked. Current setting: 15 min. Possible change to 5 min was checked but discarded.






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19	Administration	energy	Check whether radiators can be equipped with smart thermostats	03/31/23		QM/EM	In progress	
20	Administration	energy	Check whether all workstations can be equipped with power strips that can be switched off	03/31/23	0.00	QM/EM	completed	 <p>Plug strips that can be switched off are not possible, since the workstations are permanently wired in the floor tanks. Alternatively, employees should be advised to switch off all monitors manually at the end of work.</p>