

EMAS Environmental Statement 2022

For the reporting period from 1/1/2021–12/31/2021

we protect lives
worldwide

Highlights of 2021.

1,127

Employees worldwide
(-8.4% since 2020).

377 mil.

euros in annual revenue*
(+19.3% compared to 2020)

*With regard to the Norderstedt site.

35,405 t

of products manufactured in
Norderstedt in 2021
(+16.3% compared to 2020).

17

Locations worldwide
in 2021.

Key indicators of Schülke & Mayr GmbH	2021	2020	2019
Economic indicators			
Revenue (million EUR)	377*	432	362
Produced volume (t)	35,405	42,064	40,064
Environmental indicators			
Spec. electricity consumption (factory) per metric ton of product (kWh/t)	249	218	229
Water consumption (m ³ /t)	2.61	1.90	1.72
Waste per metric ton of product (kg/t)	3,179	3,541	3,618
Social indicators			
Employees worldwide	1,127	1,230	1,292
Employees in Germany	740	750	802
Occupational accidents	3	2	3

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	schülke around the world

Preface.

With this updated environmental statement, Schülke & Mayr GmbH (schülke) aims to inform about the relevant developments in environmental management for the Norderstedt location in the 2021 financial year as well as new aspects in the main fields of activity.

Furthermore, we hereby present an updated environmental program. The current edition of our Environmental Declaration 2022 serves as the basis for the EMAS monitoring audit. With its certified environmental management system, schülke has been participating in the EMAS since 1996.

This management system also includes a certification to the DIN ISO 14001 standard.

The current monitoring audit takes into account the changes of the environmental management system as per the EMAS amending regulation (EU) 2017/1505 of August 28, 2017, and Regulation (EU) 2018/2026 of December 19, 2018, as well as the new requirements of DIN EN ISO 14001:2015.

We appreciate your interest in our company's environmental reporting and look forward to hearing your comments and suggestions.

Company profile.

The Norderstedt site:

schülke operates a factory for the manufacture of chemical-pharmaceutical products at the Norderstedt site covering an area of approx. 8 hectares (~ 20 acres). This facility was put into operation in 1963 and has been continuously expanded over the last

decades. Most recently, the logistics center, with 18,500 pallet spaces for storing finished goods, was added in 2009 on an area at Lemsahler Weg.

Plans are currently underway to further expand the factory with modern pharmaceutical production and filling facilities.

Organization profile.

For more than 130 years, the schülke company has stood for a pioneering spirit, innovation, and quality. Founded by Rudolf Schülke and Julius Mayr in 1889, the Hanseatic disinfectant manufacturer has established itself nowadays as an internationally operating and successful chemical and pharmaceutical company.

schülke develops, manufactures, and globally distributes more than 300 products, including disinfectants, antiseptics, medical and cosmetic skincare products. With strong brands such as octenisept®, microshield®, and desmanol®, the company is an international market leader in the hygiene, infection prevention, and preservation sectors.

schülke offers its customers innovative technologies, products, and services in its core business areas Healthcare, Industrial Hygiene, and Over the Counter (OTC). schülke's mission is to protect life worldwide, thus actively contributing to patient safety.

Today the company, with its headquarters in Germany, employs over 1,000 people worldwide and sells its products in over 80 countries. Represented by 15 branches and a network of sales partners, the company operates three production sites in the strategically important countries Germany (schülke), France (BioXal) and Brazil (Vic Pharma).

Hereinafter, only the Norderstedt location will be considered for DIN ISO 14001/EMAS.

Corporate development.

The 2019 sale of the technical biocides product line with the Grotamar®, Parmetol®, and Grotanol® brands, was followed in summer 2021 by the sale of the business with sensiva® SC 50 and euxyl® brands of preservatives for the cosmetics industry. These products will still be produced to order at the Schülke & Mayr GmbH site in Norderstedt up to and including December 2022.

In the future, the focus for schülke's production will be on manufacturing disinfectants for wounds, skin/hands, instrument surfaces and industrial hygiene. This will then primarily involve mixing and formulation processes for this hygiene business at the Norderstedt site. Under these measures, primarily alcoholic raw materials will be used in the future.



We must always consider the impact of our actions on humans and the environment – far beyond the boundaries of our factory. That is our understanding of responsibility.

Integrated management system.

To ensure that our products meet the demands placed on them in the interests of our customers and other interested parties, we have established an integrated management system.

The legal requirements comprise:

- ISO 9001:2015,
- ISO 14001:2015, ISO 13485:2016, the EU Directive 93/42/EG Annex II (MDD),
- Regulation (EU) 2017/745 (MDR),
- EMAS,
- GMP, GDP, GVP
- Halal and RSPO

We aspire to meet the highest standards that exceed laws and regulatory requirements. That is why schülke was one of the first companies in its industry to establish an integrated management system as early as 1996. It ensures that our company's organizational structure and workflows are in line with our corporate principles and our guiding self-image. The integrated management system serves as an overarching instrument for us to achieve our goals under the total-quality concept.

In addition to internal processes, it also regulates a large number of other influencing factors: from meeting our customers' high quality requirements, maintaining occupational safety, conserving resources to avoiding negative environmental impacts. It therefore combines binding regulations for all departments at our headquarters as well as for all subsidiaries in the following five areas:

- Human Resources Management
- Environmental Management
- Occupational Safety Management
- Quality Management
- Risk Management

Nowadays, efficient risk management is no longer conceivable without a functioning compliance management system that effectively reduces behavior-induced risks. In an industry, especially, where trust is the highest asset for business success, effective compliance is indispensable.

Chemical compliance.

The hazardous substances register with stored hazard assessments according to the Hazardous Substances Ordinance was implemented in 2020. In 2021, it was subjected to a technical and content-related evaluation by the occupational safety department.

At the same time, the characteristics of the various hazardous materials can now be assigned to the various work centers via SAP. For this purpose, update transactions occur twice per year.

The system for creating operating instructions in accordance with the Hazardous Substances Ordinance was also integrated into SAP. It includes individual operating instructions and, for certain work areas, group operating instructions, which are available electronically.

The additional hazardous substance data from the expanded safety data sheets in accordance with REACH will also be fully available to downstream users via SAP in the course of this year.

Product responsibility.

To meet the requirements of various legal regulations as well as the ecological responsibility for our products, a development process for the different design phases was established.

The life-cycle analysis for an ecological overall view is included as an integral component in this process. A design audit questionnaire facilitates an-

swering questions that arise during the development phases.

For example, it was possible to switch the cloth material from synthetic fibers to natural fibers for disinfectant cloths. The process is also subjected to an ongoing improvement process with regularly scheduled reviews and updates.

Plant safety.

The production facilities at the Norderstedt site are used for the factory-made production of substances through chemical conversion, in particular for the production of disinfectants and cosmetic preservatives; therefore, they are subject to Annex 1 of the 4th Federal Immission Control Act (BimSchV). Within the framework of the resulting legal obligations, annual inspections are carried out by the State Agency for Agriculture, Environment and Rural Areas (LLUR).

Inspections performed:

- 2019 – IED inspection by the LLUR and the lower water authority.
- 2019 – Inspection in accordance with Section 16 of the Hazardous Incident Ordinance (Störfall-Verordnung) by the LLUR, the State Occupational Health and Safety Authority, the Norderstedt Fire Department and the Norderstedt Fire Department Authority.

- September 2020 – Inspection in accordance with Section 16 of the Hazardous Incident Ordinance (Störfall-Verordnung) by the LLUR, the State Occupational Health and Safety Authority, the Norderstedt Fire Department and the Norderstedt Fire Department Authority.
- 2021 – IED inspection by the LLUR and the lower water authority.
- 2021 – Inspection in accordance with Section 16 of the Hazardous Incident Ordinance (Störfall-Verordnung) by the LLUR, the State Occupational Health and Safety Authority, the Norderstedt Fire Department and the Norderstedt Fire Department Authority.

Our systems are consistently rated positively in the opinion of the authorities.

Comments and information are evaluated under our management system and assigned measures and responsibilities.

Environmental management.

At a time when dramatic climate change threatens the future of the planet, it is even more important to think critically and holistically about the impact our actions have on the environment: from sweeping policy changes to actions taken by each individual, from reducing waste to protecting our ecosystem.

In addition to our environmental certification in accordance with DIN ISO 14001 and EMAS, which we have held for over 25 years, we have decided to once again publish a sustainability report from 2022 onward along with the Environmental Declaration. This report focuses on a climate action plan with projects and measures aimed at reducing schülke's CO₂ footprint in the long term.

Additionally, we will launch other sustainability initiatives, including: further reducing electricity heat and water consumption, improving the environmental performance of our products and packaging, and reducing the environmental impact of our supply chain.

We encourage a sense of responsibility for the environment among all employees and expect them to act accordingly.

We offer our customers assistance with ecological questions about our products and services and maintain an open dialog about the ecological aspects of our products and processes.

Schülke & Mayr GmbH's management system is based on the principle of Total Quality Management (TQM) and integrates, among other things, the systems for plant safety and hazardous incident management as well as the environmental management system, the systems for ensuring product and service quality, and the system for guaranteeing the safety and health of employees and customers. Within the framework of Total Quality Management, quality is understood holistically and comprehensively.

We use and steadily advance an integrated management system to maintain the TQM. It is certified according to ISO 9001, ISO 13485 and ISO 14001. In addition, schülke's Norderstedt site was first validated as early as 1996 in accordance with the European Eco-Management and Audit Scheme (EMAS) and since then has been repeatedly validated, most recently in May 2020.

The safety management system, as a component of the integrated management system, also serves to implement the concept for the prevention of hazardous incidents pursuant to Section 8 of the Hazardous Incident Ordinance (StörfallV) and regulates the structural and procedural organization.

The procedural instructions and work instructions applicable to the operating area describe the organizational and operational structures in detail with regard to the necessary measures for occupational safety and environmental protection and the prevention of hazardous incidents.

This includes the complete and distinct definition of the responsible persons, tasks, competencies, and the system of authorized representatives as well as the regulation of the interfaces between these organizational units and from these units to external bodies such as customers or authorities.

The procedural organization regulates the logical and chronological sequence of individual measures of the work or decision-making processes for the fulfillment of certain tasks or for the achievement of certain goals, taking into account given constraints such as legal requirements.

The company's organizational structure ensures compliance with the regulations and instructions that apply to the plant's operation and that serve to protect against harmful environmental effects, other hazards, significant disadvantages and significant nuisances.

Schülke & Mayr GmbH's organizational structure is outlined in organizational charts, which are part of the management system manual. The competencies and responsibilities of operational managers and representatives are formulated in job descriptions, organization charts and delegation letters in accordance with DGUV regulation 2.

The job descriptions also specify the tasks to be performed in safety organization and thus in risk and incident management, both with regard to the prevention-oriented tasks and the tasks to be performed by the job holder in the event of an incident.

The management has transferred the duties and personal responsibility for the facilities to the operational hierarchy levels within the company

at the Norderstedt site in accordance with the principles of proximity and competence.

In the line organization, responsibility is transferred to the employees through delegation of duties. It is only assumed by persons with the appropriate technical training, experience and aptitude. In their fulfillment of the assigned tasks, the respective responsible persons are supported by their employees.

The resources made available at all levels in the delegation chain ensure that the functional units are provided with the personal, material and financial resources necessary to perform their tasks. Within the delegation chain, defined communication channels ensure effective information and controls.

Deputies have been appointed for all essential positions who can take over the tasks that fall under safety organization in case of incident or need.

In addition to the activities of the environmental management officer, implementing the functions of our legally required representatives forms the core of our environmental organization:

The representatives exercise the prescribed duties of consultation, cooperation and control, e.g. through inspections, participation in audits, carrying out monitoring measurements and preparing the necessary reports, in particular the annual reports required by law. They appraise investment projects with regard to environmental protection and safety issues.

The agents have no authority to issue instructions to the operational line. The legal responsibility for the fulfillment of environmental protection and safety concerns in the facilities of the operating area lies with the respective person responsible for the facilities or head of an organizational unit.

The representatives are not bound by any instructions from the company within the scope of their work and have the right to speak directly to company management.

In accordance with legal requirements, the company has appointed the representatives and

specialists listed below for the Norderstedt operating area.

Immission Control Officer

Pursuant to Section 54 of the Federal Immission Control Act (BImSchG), an Immission Control Officer was appointed, to whom the company assigned the tasks and duties resulting from Sections 54 and 56 BImSchG in connection with the 5th Federal Immission Control Act (BimSchV).

Hazardous Incident Officer

Pursuant to Section 58a BImSchG, a Hazardous Incident Officer is appointed internally in connection with the 5th BImSchV and is registered with the Schleswig-Holstein State Office for Agriculture, Environment and Rural Areas (LLUR, Department 77). The Hazardous Incident Officer has an advisory function; no decision-making powers have been delegated to him or her per Section 58 c para. 3 BimSchV.

Waste Management Officer

Pursuant to Section 54 of the Closed Substance Cycle Act (KrWG), a Waste Management Officer was appointed, to whom the company assigned the tasks and duties resulting from Section 55 KrWG.

Occupational Safety Specialist

The Senior Occupational Safety Specialist has been appointed in writing in accordance with Section 5 of the Occupational Safety Act (ASiG). He or she has been assigned the tasks in accordance with Section 6 of the Occupational Safety Act.

Fire Prevention Officer

A Fire Prevention Officer has been appointed in writing in accordance with Section 5.12.3 of the Industrial Building Directive (IndBauRL).

Company Doctor

The Company Doctor has been appointed in writing in accordance with Section 2 of the Occupational Safety Act (ASiG). He or she has been assigned the tasks in accordance with Section 3 of the Occupational Safety Act.

Dangerous Goods Officer

In accordance with Section 1 of the Ordinance on Dangerous Goods Commissioners (GbV), an external Dangerous Goods Officer was appointed in

2020. This means that requirements for fulfilling the legal supervisory function for the transport of dangerous goods are still guaranteed.

schülke conducts comprehensive internal environmental audits annually and ensures that each area is audited at least once in a three-year cycle.

Together with the updated list of relevant environmental impacts and previous year's facts and figures, the audit reports form the basis for a management assessment and the updating of our environmental program. From this, we prepare an updated environmental statement every year.

Personnel development.

The processes for personnel development and for optimizing the transfer of knowledge within the company were developed further. These processes continue to be managed through defined key figures and are regularly evaluated.

The central communication platform on the intranet with access options for every employee was further expanded. This secures further information on the development of the company.

SAP SuccessFactors was introduced as a system to plan and organize internal and external training.

This tool is used for employee career development through planned education and training.

The key areas are:

- Job-related training of procedures and work instructions
- Superordinate training of company requirements on specific compliance topics
- Safety training
- Environmental training
- Training to increase energy efficiency

This system is used in consultation with the respective managers and the persons in charge to ensure that new legal requirements are also incorporated into the training planning.

For continuous professional qualification and personal development of each employee, an annual review is conducted with the following essential components:

- Target agreements
- Performance evaluation

(The training process is described in the procedure instructions VA 0005.)

Important environmental factors.

As a set of regulations, EMAS sets extended requirements for energy use and consumption within the framework of environmental management. Environmental and energy management are a useful addition to our integrated management system. EMAS is also an approved alternative to DIN ISO 50001 and to the energy audit in accordance with Section 8 of the Energy Service Act (EDL-G). We have therefore decided to address our environmental impact at additional levels and to integrate the topics of energy, climate, resource, and environmental protection holistically into our organization and our EMS.

At schülke, the evaluation of significant environmental aspects is ensured by observing the following criteria.

Environmental considerations

- the scope of the environmental impact
- the severity of the environmental impact
- the probability of occurrence
- the duration of the impact

This evaluation of significant environmental aspects is updated annually.

The following significant environmental aspects result from recording and evaluating our company's environmental impact:

Environmental aspect	Core indicators
Energy	Total electricity consumption Consumption of gas/heating oil for heat generation and steam
Material	Raw materials and packaging material used
Water	Total annual water consumption thereof proportionally purified water as raw material
Waste	Total amount of waste (for disposal and recovery) thereof proportionally amount of hazardous waste
Wastewater	Total amount of wastewater thereof proportionally process wastewater from wastewater treatment

Summary of the environmentally relevant core indicators, 2021.

Input		Output	
Electricity consumption	8,803,526 kWh		
Steam consumption	8,363,877 kWh		
Quantity of raw materials used	21,332 t	Quantity produced	35,405 t
		Total amount of waste	3,179 t
		- thereof for disposal	2,519 t
		- thereof for recycling	660 t
		Hazardous waste	2,726 t
Total amount of water consumption	92,356 m ³	Total volume of wastewater	68,286 m ³
		- proportion of process wastewater	39,267 m ³
		Purified water as raw material	15,479 m ³

In the long term, we want to replace the core indicators with company-specific indicators that allow plausibility checks to be carried out even more

transparently in a normalized form and allow appropriate ongoing improvements in environmental performance.

Key indicators.

General information for employees.

Employees.

Employees	2021	2020	2019	2018
Worldwide	1,227	1,230	1,292	1,207
International	387	480	490	458
Germany	740	750	802	749
Norderstedt	727	– *	– *	– *

* Not shown separately.

Occupational safety.

Unfortunately, the number of occupational accidents resulting in more than one day's absence from work increased compared to the previous year, which means that we are back at the 2019 level.

The declared goal remains to significantly reduce the number of occupational accidents again through targeted prevention measures.

Occupational accidents	2021	2020	2019	2018
Amount*	3	2	3	3

*Accidents at work with > 1 day lost work.

Economic key indicators.

Revenue.

Revenue worldwide	2021	2020	2019	2018
Revenue (million EUR)	377*	432	362	343

*With regard to the Norderstedt site.

Quantity produced.

The significant decrease in the volume of manufactured bulk goods can be explained by the sale of the preservatives division in 2019 and 2021 and

the associated continuous decline in contract manufacture of these products.

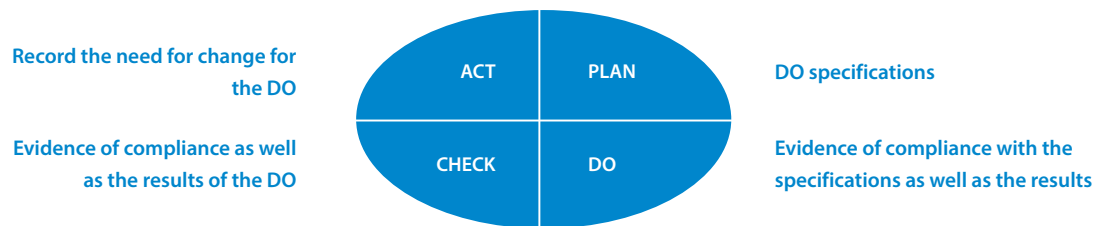
Quantity produced at the Norderstedt site	2021	2020	2019	2018
Quantity (t)	35,405	42,285	40,064	41,164
Deviation in %	-16.3	5.5	-2.7	2.5

Further development of energy management.

Through our environmental management system in accordance with DIN ISO 14001/EMAS, we systematically address the impact of our activities, products, and services on the environment. In addition to the environmental aspects of material and water consumption, emissions, and waste, we also look at energy.

For updates of the energy management system (ENMS), we take the PDCA cycle into account, which is based on DIN ISO 14001/EMAS, thus ensuring the requirements of the ENMS according to DIN ISO 50001 are met.

PDCA cycle.



At schülke, the energy team was reorganized, and energy topics were discussed and coordinated during regularly scheduled meetings. Below, we demonstrate how the PDCA cycle has been, and continues to, be used to drive energy management in the company and increase energy efficiency.

This results in a base load share of approx. 66 % for the production-free periods.

This pattern could be observed at all entry points: NSHV, Pharma, Administration and Logistics. See graphic 3

Plan:

To gain an overview of electricity consumption and load profiles, plans were made to install electricity meters in the plant to equip all entry points (transformers) and to fit meters for the presumably largest consumers (in main, sub and machine distribution boards). The meters are maintained in a measuring point list.

Act:

Therefore, we discussed with the energy team how we could achieve a reduction in the base load at the site as quickly as possible.

Various actions were initiated as the next Plans and Dos.

Do:

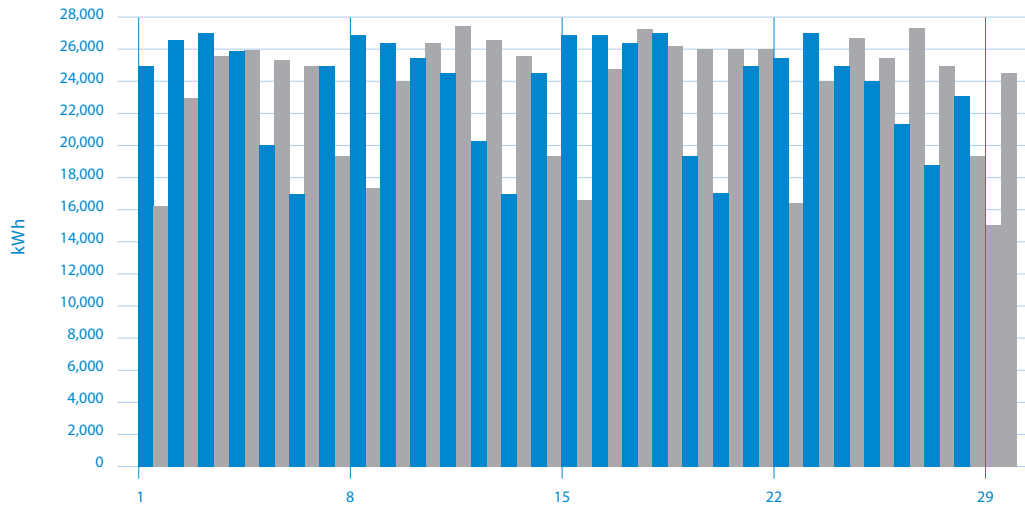
The 7 transformers were the first to be equipped with meters in 2019. By the end of Q1 2022, a total of approximately 160 electricity meters were installed.

One measure was to create a one-pager for production and a one-pager for the office workstations and to make employees aware of it via the intranet, bulletin boards and in production via the area managers. The one-pagers describe simple rules of conduct to prevent or at least reduce energy waste. Another measure is to replace the old lighting with LED lighting. See graphic 4

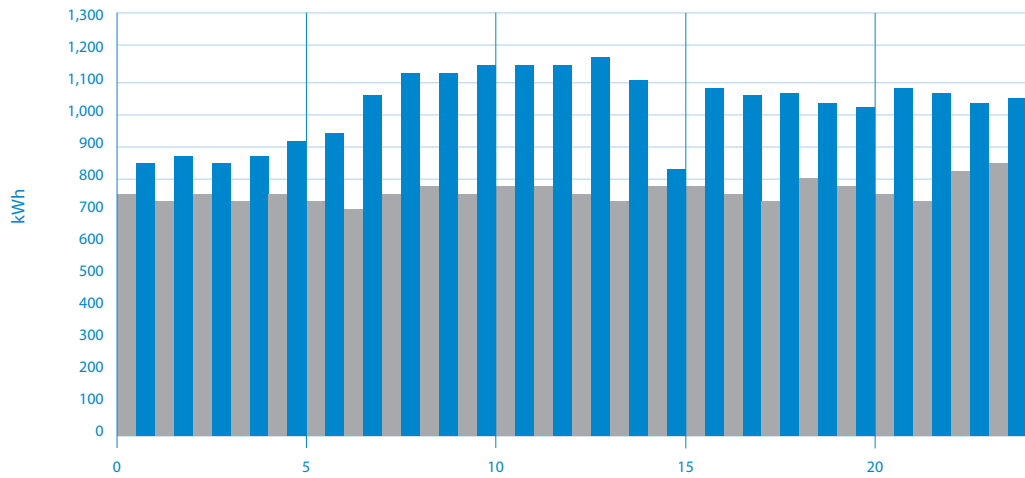
Check:

Analysis of the site's electricity consumption revealed that the base load during production-free times is very high compared to the load profile during work days. Graphic 2 on page 13 compares electricity consumption on Sundays and weekdays.

Electricity consumption at the Norderstedt site 2022.



Graphic 1: Electricity consumption at the Norderstedt site in January and February 2022 ■ January ■ February

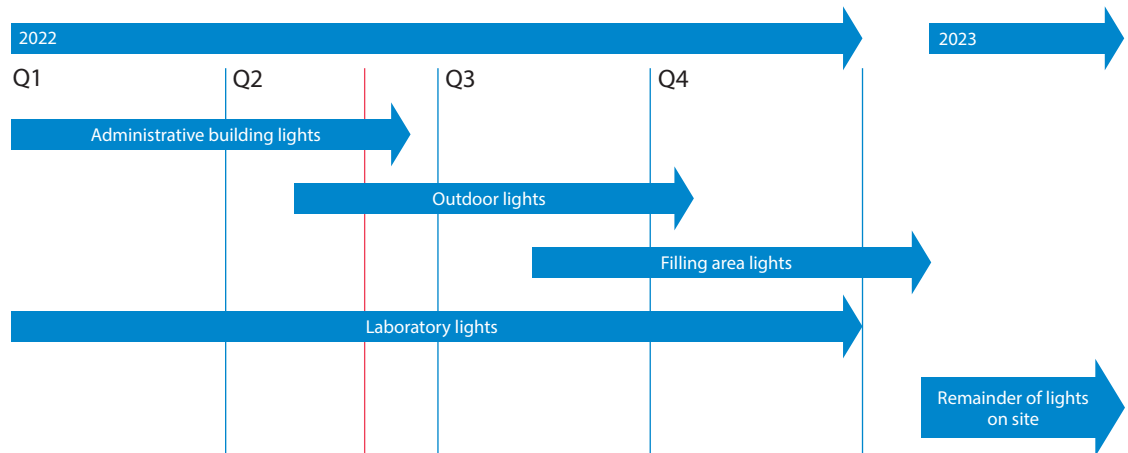


Graphic 2: Electricity consumption Norderstedt site, Sunday 03/06/2022 and Monday 03/07/2022 ■ Sunday ■ Monday



Graphic 3: High base load at all entry points

Project plan LED lighting.



Graphic 4: Project plan

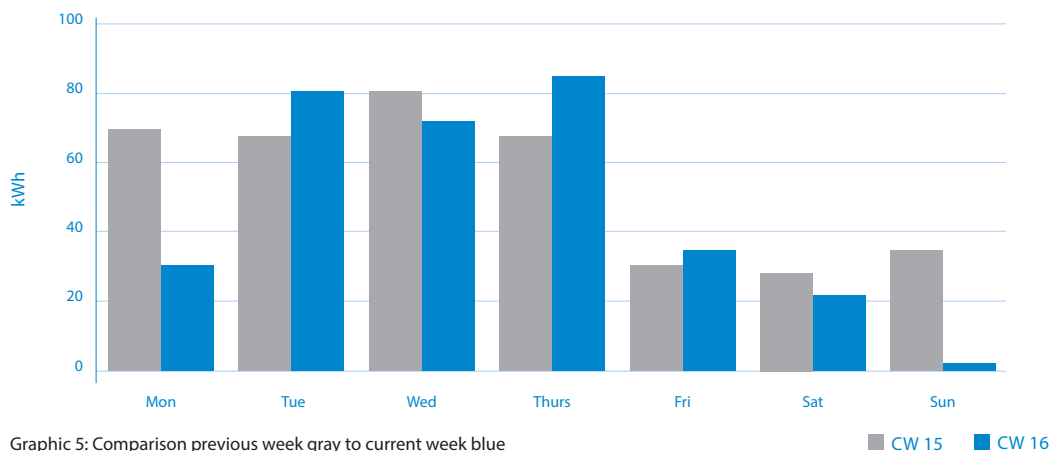
Calculations showed how much energy can be saved by using LED lighting. In the administration, the calculations that predicted a saving of 2/3 of the previously spent lighting energy have already been proven via the installed meters.

Furthermore, at the same time, the brightness level in the affected areas could be increased by up to 300%.

A third measure was and is to discuss with the operators which plants and machines can be

switched off or at least shut down at which times. In the BE50 division, the first reviewed item was the packaging. Again, the base load on Sundays is about 1/3 of the power consumption. To conduct the test, all systems were switched off after the end of the shift on Saturday afternoon. On Monday, the equipment was turned back on before the start of the shift. The savings effect could be clearly shown in the GridVis (graphic 5). In this area, shutting down at the end of the shift on Saturday and powering everything back up on Monday has been introduced as a standard process in the meantime.

Electric energy consumption BE 50 - packing.



Graphic 5: Comparison previous week gray to current week blue

In the sense of the PDCA cycle, we are now continuously looking for anomalies with the energy team, which measures can be planned, how we imple-

ment them, and whether the expected successes are achieved.

Recording and control of the essential energy aspects.

Three steps are necessary for recording and controlling the essential energy aspects according to ISO 50001:

Step 1:

Demarcation of essential energy aspects -> OBJECTIVE: 80%
Determination of the areas/plants, etc. and the energy sources (natural gas, electricity, ...) as well as determination of the annual energy consumption and costs.

Step 2:

Determination of the responsible key figure operators

Preparation of a priority list, determination of the essential energy aspects, and the persons responsible

Step 3:

Clarification of possible influencing factors
Production quantities, outside temperature, processes, etc.

In the medium term, we intend to further integrate the requirements of ISO 50001 into our management system with regard to the presentation and improvement of the main energy aspects.

Energy supply and energy consumption.

The following energy sources are used at Schülke & Mayr GmbH's Norderstedt site:

Electric power, natural gas, heating oil, diesel fuel

Allocation of consumption.

The energy consumption for electricity and natural gas/oil is measured, estimated or determined through spot measurements (e.g. with measuring clamps).

The key areas are

- Plant (manufacturing and filling)

- Hall 3 (pharma/warehouse)
- Warehouse and distribution logistics (plant and logistics center)
- Administration (office building – offices, computer center, and hallways, etc.)

Environmental indicators.

Electricity.

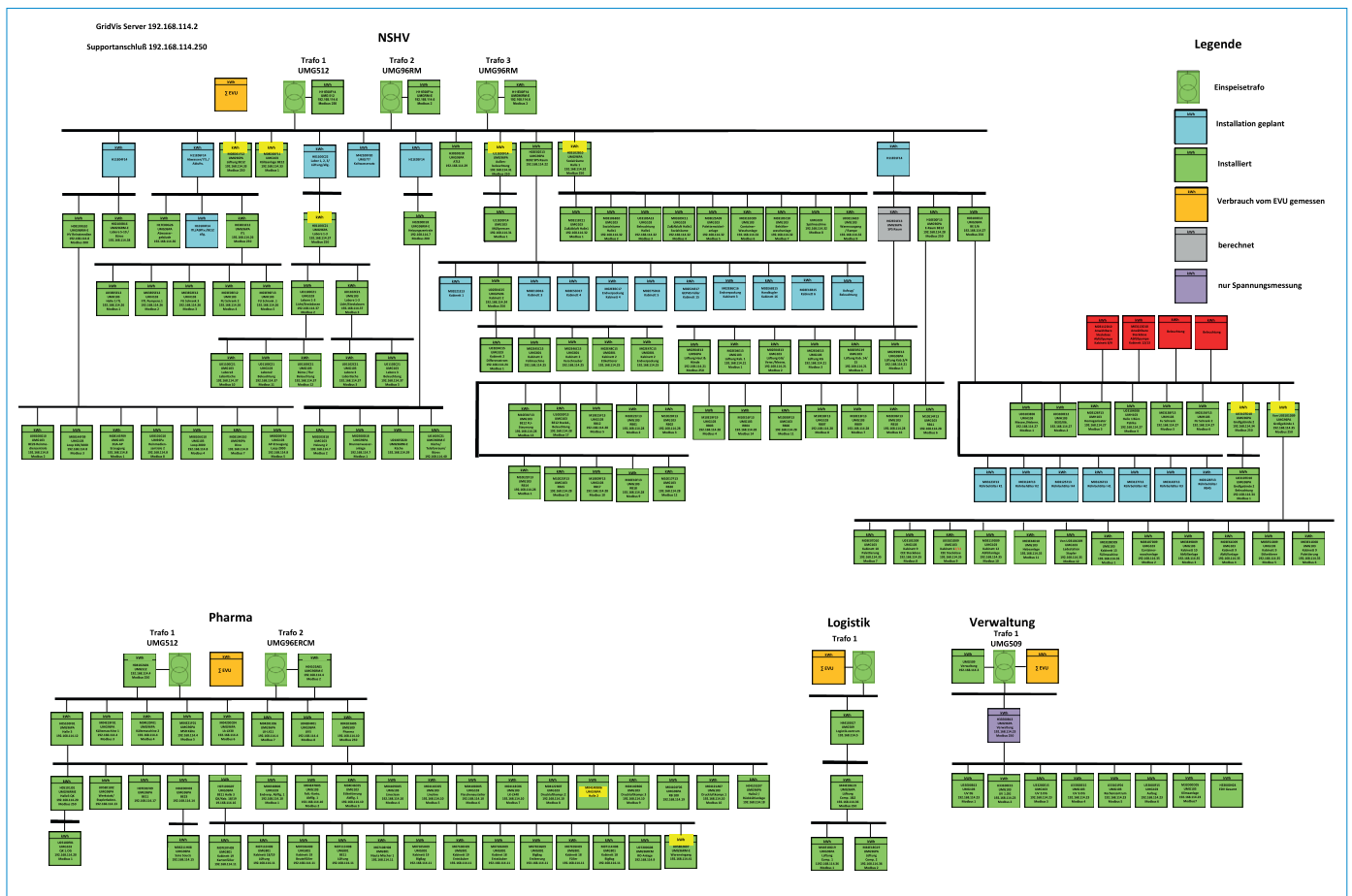
Absolute electricity consumption at the site fell by approx. 4%. This is due to the effects of lower bulk production volumes as a result of discontinuing preservatives. However, the first effects of the energy-saving projects, such as optimizing compressed air generation and using LED technology for lighting, are also becoming apparent.

Specific electricity consumption has increased significantly. This reflects the high proportion of

electrical energy that is independent of the production volume for auxiliary processes such as ventilation and water treatment. Furthermore, logistics and administration are included as a fixed proportion for consideration of the entire site's consumption.

An energy management environmental goal will address this issue in the future.

Electricity consumption at the Norderstedt site	2021	2020	2019	2018
Factory total (kWh)	8,803,526	9,198,089	9,164,835	8,972,471
Spec. electricity consumption (factory) per metric ton of product (kWh/t)	249	218	229	218
Deviation in % (spec. electricity consumption)	14.2	-4.8	5.0	0.5

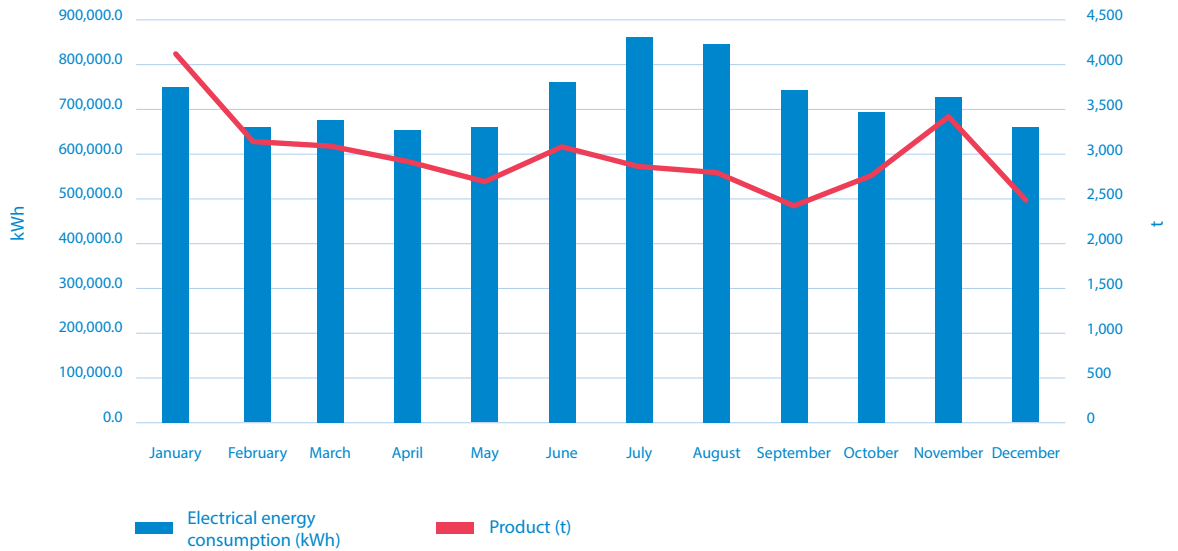


Electricity meter layout at the Norderstedt site

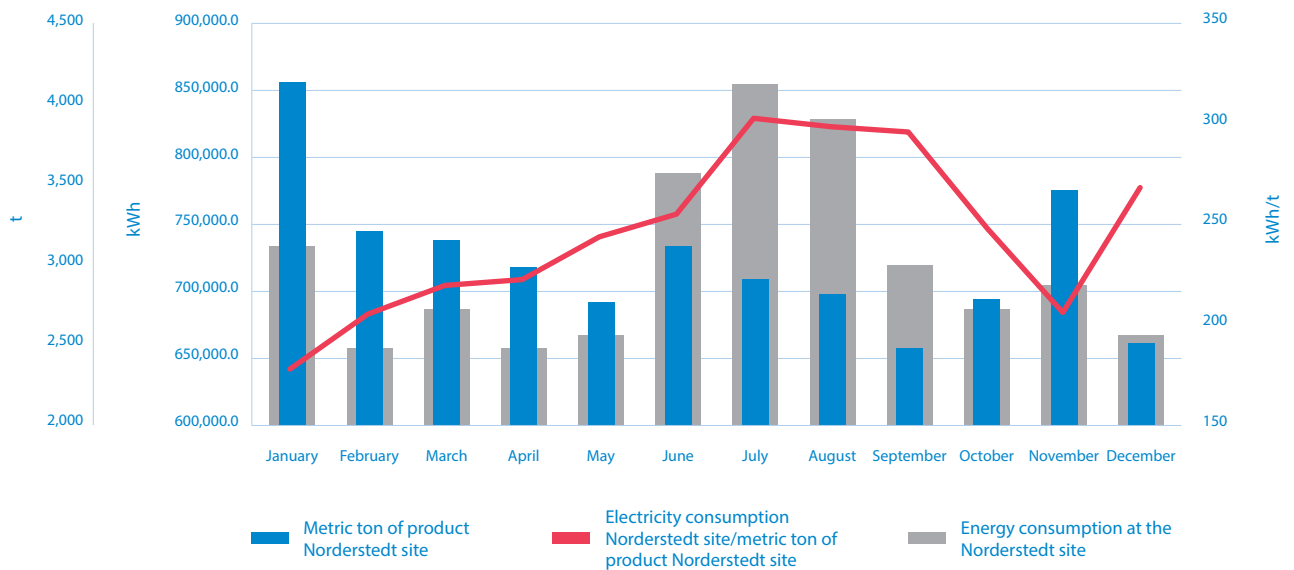
Electricity consumption by area

Unit	Year	Electricity consumption (kWh)	Previous year (%)
Factory (total)	2016	7,457,087	6.1
	2017	7,487,391	0.4
	2018	7,753,196	3.6
	2019	7,990,479	3.1
	2020	8,079,103	1.1
	2021	7,703,924	-4.6
Administration building	2016	494,384	0.2
	2017	493,581	-0.2
	2018	459,626	-6.9
	2019	430,983	-6.2
	2020	420,172	-2.5
	2021	422,972	0.7
Logistics center	2016	719,312	-0.6
	2017	723,902	0.6
	2018	759,669	4.9
	2019	743,373	-2.1
	2020	698,814	-6.0
	2021	682,844	-2.3
Site	2016	8,570,417	5.2
	2017	8,704,874	0.4
	2018	8,972,471	3.1
	2019	9,164,835	2.1
	2020	9,198,089	0.4
	2021	8,809,740	-4.2

Energy consumption and production volumes for 2021



Electricity consumption Norderstedt site/metric ton of product Norderstedt site for 2021



The diagram does not show any correlation between the produced quantity and electrical energy consumed. To enable a more detailed evaluation in the future and to identify correlations, further measuring points were installed in 2020 and in 2021. Any seasonal or other dependencies can then be better identified and standardized.

Data analysis shows a high base load across all areas of about 2/3. This is the reason for such a great focus on reducing the base load. Together with operators, equipment was identified that can be shut down on weekends or at shift-end.

Heating.

The total consumption of heating energy in 2021 was around 8.2 million kWh, which corresponds to a consumption difference of +7.2% compared to the previous year.

Heat generation is mainly used to heat static heating surfaces as well as for the air conditioning systems. Only a small part is used for hot water production. With regard to the air conditioning

systems, the useful life is independent of the production volume, as they are practically always in operation. A lowered operation was also validated, with the new air conditioning system of the BE02, which allows the plants to run in lowered operation during production-free periods. This allows the equipment to be run even more efficiently.

Heating (gas and oil) in Norderstedt	2021	2020	2019	2018
Heating (kWh)	8,155,321	7,607,219	7,956,940	7,785,030
Average outdoor temperature* (°C)	9.1	10.4	10.2	10.7
Heating degree days	3,462	2,978.9	3,185.5	3,109.9

* Source: www.wetterkontor.de

Steam.

The total steam consumption in 2021 was 8.4 GWh. The specific steam consumption has fallen by 6.3% since the previous year.

This is due, among other things, to the significantly lower production volumes in 2021.

Steam consumption at the Norderstedt site	2021	2020	2019	2018
Steam (kWh/year)	8,363,877	9,371,016	9,275,906	10,501,872
Steam per metric ton of product (kWh/t)	236	222	232	255
Deviation (%)	6.3	-4.3	-9.0	+/-0.0

Natural gas and heating oil.

Natural gas and heating oil for schülke's Norderstedt site are procured from the public network or from local suppliers. The site has three natural gas entry points: 1. Factory, 2. Logistics center, and 3. Administration building.

There is an underground tank for the heating oil at the factory. The consumption of natural gas and heating oil requires the most energy resources at the Norderstedt site.

Natural gas and heating oil are mainly used for the burners for steam production and the boilers (hot water for cleaning purposes, heating, and hot water) in the factory. The thermal energy required for the heating systems in the administration building and the logistics center is allocated a small percentage of total consumption.

Unit	Year	Consumption of natural gas (kWh)	Consumption oil (kWh)	Previous year (%)
Factory (total)	2016	16,266,909	651,690	13.5
	2017	13,732,728	3,856,990	4.0
	2018	16,314,686	1,707,893	2.5
	2019	16,472,319	799,724	-4.2
	2020	14,322,178	1,638,968	-7.6
	2021	15,280,338	2,928,512	14.1
Administration building	2016	379,192	-	12.6
	2017	380,391	-	0.3
	2018	360,313	-	-5.3
	2019	352,867	-	-2.1
	2020	339,386	-	-3.8
	2021	412,316	-	21.5
Logistics center	2016	756,963	-	8.3
	2017	683,704	-	-9.7
	2018	669,787	-	-2.0
	2019	746,027	-	11.4
	2020	764,603	-	2.5
	2021	953,206	-	12.4
in Norderstedt	2016	17,403,064	651,690	-
		18,054,754		
	2017	14,796,823	3,856,990	3.3
		18,653,813		
	2018	17,344,786	1,707,893	2.1
		19,052,679		
2019	17,571,213	799,724	-3.6	
	18,370,937			
2020	15,961,146	1,638,968	-7.1	
	17,065,135			
2021	13,914,816	2,928,512	-1.3	
	16,843,328			

Diesel fuel.

In 2021, Diesel fuel was used for:

- Service vehicles
- Emergency diesel for the sprinkler systems (factory and logistics)
- Wheel loader for on-site transport

Service vehicles.

In 2021, the fleet comprised 132 vehicles.

The increase in diesel consumption is due to the increase in the number of vehicles and partly due

to increased use of vehicles after the 2020 Covid-19 year. The higher consumption also leads to higher CO₂ emissions.

Year	Vehicles (quant.)	Previous year (%)	Diesel consumption (l)	CO ₂ emissions (kg)	Previous year (%)
2016	165	-	369,480.6	979,123.6	-
2017	285	72.7	379,844.1	1,006,586.9	2.8
2018	203	-28.8	378,194.9	1,002,216.5	-0.4
2019	158	-22.2	331,752.3	879,143.6	-12.3
2020	117	-25.9	133,699.0	354,302.4	-59.7
2021	132	12.8	211,293	559,926	58.0

(1 liter diesel corresponds to 2,650 kg CO₂)

Emergency diesel.

A heating oil tank (factory) and a diesel tank (logistics center) are used to operate the emergency diesel for the sprinkler systems in the factory and logistics center.

This represents a very low percentage (0.04% of total CO₂ emissions) and is not considered in detail here at present.

Consumption in 2021 was:

- Diesel fuel: 732 liters/year, which corresponds to approx. 1,939.8 kg CO₂
- Heating oil: 280 liters/year, which corresponds to approx. 742 kg CO₂

Wheel loaders.

A diesel-powered wheel loader was put into operation to transport materials and components between two workshop areas (factory and logistics center).

This consumption in 2021 represents a very low percentage of total CO₂ emissions and is currently not considered in detail here.

Water.

Water consumption increased by 14% in absolute terms. However, specific water consumption in relation to the quantity of manufactured bulk goods increased by more than 37%.

This effect can be explained with the new AP water generation from Letzner. In 2021, for the first time, this new equipment was in operation throughout the entire year. Furthermore, all processes in the GMP environment in production

and filling were converted to AP water. There has also been a significant increase in the use of AP water due to the new cleaning instructions as part of the cleaning validation process.

Various measures under the environmental program attempt to reduce the consumption of AP water by optimizing the purification process and by optimizing the operation of the AP water generation plants.

Water consumption at the Norderstedt site	2021	2020	2019	2018
Water consumption (m ³)	92,356	81,015	68,793	70,480
Spec. water consumption (m ³ /t)	2.61	1.90	1.72	1.71
Deviation in % (spec. water consumption)	37.4	10.5	0.6	-1.0

Overview of water consumption:

Unit	Year	Consumption (m ³)	Previous year (%)
Factory (total)	2016	64,347	6.7
	2017	68,005	5.7
	2018	68,332	0.5
	2019	66,992	-2.0
	2020	79,580	18.8
	2021	90,840	14.1
Administration building	2016	1,181	-3.7
	2017	1,000	-15.3
	2018	997	-0.3
	2019	971	-2.6
	2020	648	-33.3
	2021	423	-34.7
Logistics center	2016	574	2.7
	2017	615	7.1
	2018	1,151	87.2
	2019	830	-27.9
	2020	787	-5.2
	2021	1,093	38.9*
in Norderstedt	2016	66,102	6.4
	2017	69,620	5.3
	2018	70,480	1.2
	2019	68,793	-2.4
	2020	81,015	17.8
	2021	92,356	14.0

*) Examining the highly fluctuating water consumption in the logistics center is an environmental target for 2022

Wastewater.

The amount of water used and thus the share of process wastewater increased in the year under

review. However, this is attributable to the increased quantity of manufactured products.

Wastewater quantity at the Norderstedt site	2021	2020	2019	2018
Wastewater volume (m ³)	39,267	36,752	34,009	34,737

Wastewater emission.

In 2021, the emissions in process wastewater (mg AOX/l) fell significantly below previous years' values.

The threshold value of 0.5 mg/l according to the Norderstedt Wastewater Statute was thus reliably complied with.

Wastewater emission at the Norderstedt site	2021	2020	2019	2018
AOX value per liter of wastewater (mg/l)	0.02	0.03	0.07	0.08

Remediation wells.

The volume of extracted groundwater using the remediation wells has decreased slightly since the previous year by 1/3.

Amount of extracted groundwater at the Norderstedt site	2021	2020	2019	2018
Annual extraction volume (m ³)	6,982	9,869	9,930	10,323

Exhaust air emission.

The exhaust air emissions must be measured every 3 years according to the Technical Instructions on Air Quality Control (TA Luft). In addition, schülke uses a measurement concept for its own best interest.

In 021, additional measurements were carried out. Compliance with the legal requirement of TA Luft of $\leq 20\text{mg C/m}^3$ was ensured.

Exhaust air emission at the Norderstedt site	2021	2020	2019*	2018
Volatile organic compounds (mg C/m ³)	2.0	1.53	–	2.28

* For technical and organizational reasons, the corresponding control measurements could not be carried out in 2019.

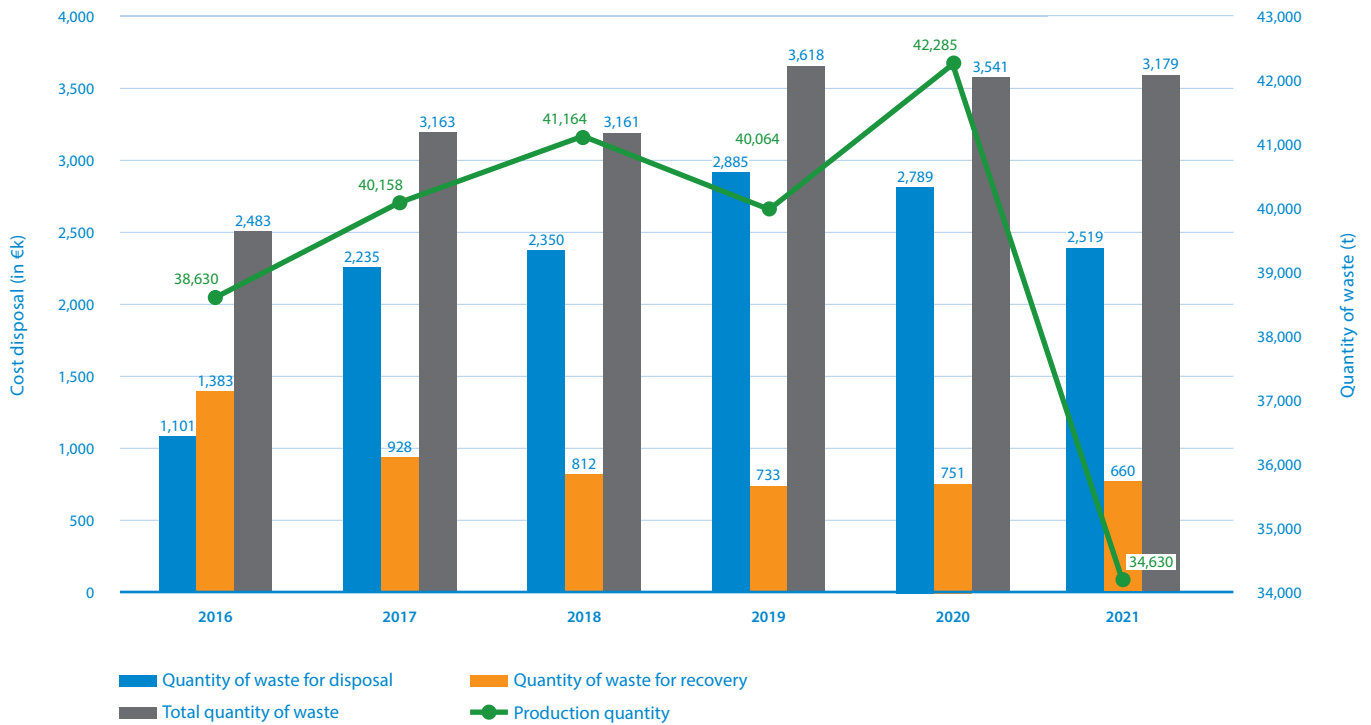
Waste.

Due to the decreased production volume, waste was reduced by 10%. In contrast, the key figure for the specific waste volume increased (7.2%).

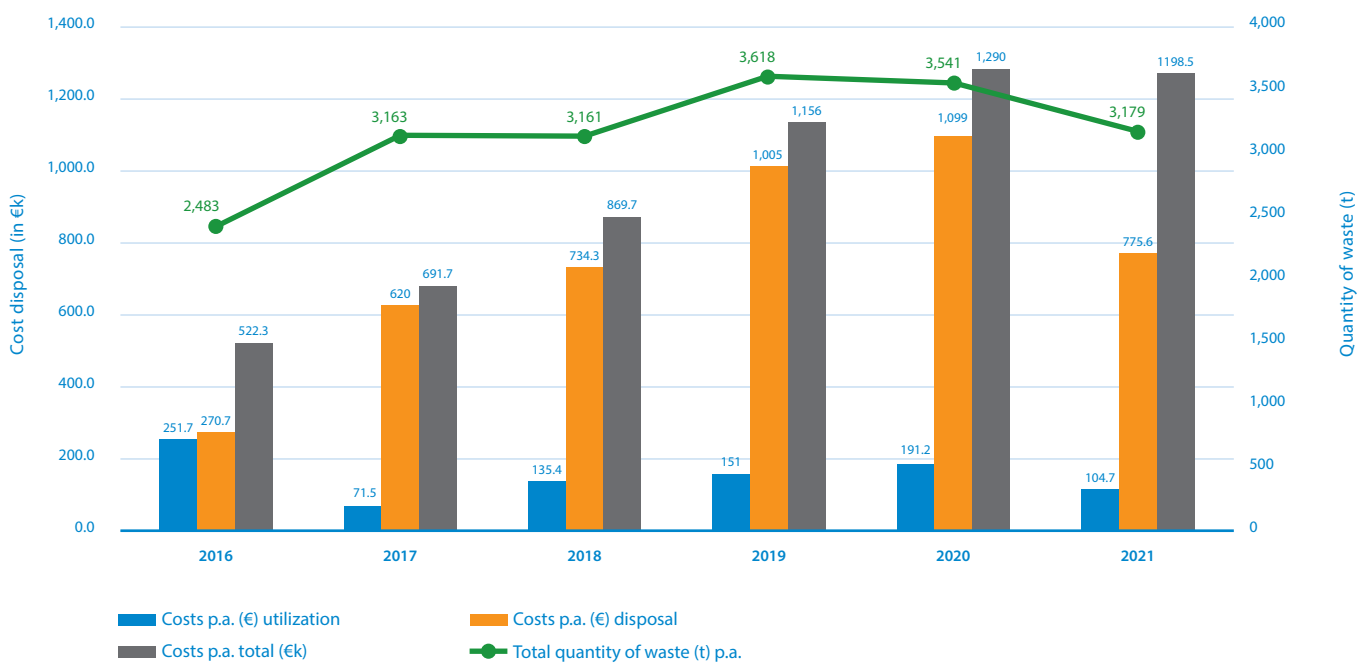
The reason for this is the proportion of non-production-related waste.

Amount of waste at the Norderstedt site	2021	2020	2019	2018
Total amount of waste (t)	3,179	3,541	3,618	3,161
Spec. waste volume (kg/t)	89.79	83.74	90.3	76.8

Total waste volume and production volume development 2016–2021



Development of disposal costs 2016–2021



Continuous improvement of environmental performance.

Optimization potentials regularly arise from the work of line and specialist managers with regard to the most important environmental aspects, which currently lead to the following overarching topics, with the most important ones being converted into measurably realizable environmental objectives:

Use of fossil and electrical energy

- Implementation of measures from the energy consumption analyses
- Completion of conversion to LED lighting systems by 12/22
- Preliminary planning CHP
- Preliminary planning for photovoltaic system on logistics center roof
- Preliminary planning of a new power factor correction system

Processing of raw materials and water

- Optimization of water consumption at the ultrapure water plants

Cleaning of production facilities

- Optimization of cleaning processes in production through cleaning validation by 12/22

Storage of raw materials and products

- Improving the control of transports between the Norderstedt factory and the various external logistics locations

Product-related environmental impacts

- Improvement of the sales packaging for wet wipes

Waste/wastewater treatment:

- Improved wastewater management by optimizing activated carbon exchange
- Replacement of old compressed air system – use of a new, more efficient system
- Utilization examination of an in-process measurement AOX value optimization approach objective: Extension of the service life of activated carbon.
- Optimization of logistics of internal PE-foil collection, result: No recycler could be found due the quantities being too small

- Introduction of a uniform waste container concept, project not yet completed
- Improvement of storage facilities for methyl formate (MF), not applicable due to sale of PC
- Optimization of the disposal of rinsing liquids to increase the recovery rate
- Disposal route for formic acid, not applicable due to sale of PC
- Optimization of the reconditioning of completely emptied IBCs, project not yet completed
- Reduction of packaging waste of raw materials (together with purchasing). Project not yet completed

Water:

- Introduction of electronic metering devices to determine water consumption
- Testing the use of water-saving processes, such as countercurrent washing
- Multiple use and recirculation in washing and cleaning processes
- Indirect cooling, e.g. instead of using injection condensers, or injection coolers to cool vapor phases
- Use of wastewater-free processes for vacuum generation
- Saving cooling water, among other things, by converting the compressed air generation
- Reduction of evaporation losses at the cooling systems
- Optimization of the quantities of water used to produce water for pharmaceutical purposes
- Examination of water consumption fluctuation in the logistics center

Environmental program 2020–2022.

Energy	Measure	Goal	Deadline
Reduction of energy consumption	Optimization of the lighting system in the canteen by installing LED lighting and using motion or presence detectors.	Planned reduction in consumption by 33,500 kWh/a compared to 2019 with a useful life of 295 days per year with a simultaneously reduced useful life of 6,700 hrs/year.	Project completed. Data collection to determine energy savings currently somewhat difficult, as the canteen cannot yet be fully used again due to covid measures.
	Optimization of the lighting in the logistics center.	Savings of 250,000 kWh/year with the same operating time as 2019.	Conversion of the lighting in the picking racks completed. High-bay warehouse postponed. Due to the elimination of the 3rd shift, savings will be somewhat smaller.
	Reduction of disturbances on a filling line.	Savings of 15,000 kWh/year with a reduction of operating hours by 5% each year compared to 2019.	Project started. Normalization of reference values to determine savings urgently required due to covid-related production fluctuations.
	Introduction of an energy consumption analysis.	Connection of approx. 45 measuring counters by 05/2020. Then step-by-step preparation of the analyses.	Project started, 80% implemented.
	Conversion of the heat transportation technology to high-efficiency pumps. Use of IE3 and IE4 pump engines for fluid transport.	Savings of 20,000 kWh/year with the same operating time as 2019.	Analysis of the hydraulic system by 12/2022.
Energy efficiency	Study on the use of CHP units for heat and steam generation.	Completion of the study by 10/2020. Planned savings and the start of project planning will be determined thereafter.	Study completed. Preliminary planning has commenced.
	Photovoltaic roof area logistics center.	Own power generation.	Preliminary planning has commenced.
	Renewal of the ventilation of the compartments in the logistics center.	Savings of 50,000 kWh/year with the same operating time as the previous year.	Project completed. Due to the elimination of the 3rd shift, savings will be somewhat smaller.

Environmental program 2020–2022.

Water and wastewater	Measure	Goal	Deadline
Conservation of drinking water reserves	Optimization of the cleaning processes in production by cleaning validation.	Reduction in the amount of water used by 5% compared to the previous year.	This project has been postponed for capacity reasons.
	Replacement of measuring equipment to determine water consumption and wastewater flows in the various operating units.	Improvement of data transmission and balancing of consumption data; qualitative objective.	Project started. Implementation by 06/2023.
	Multiple use and recirculation in washing and cleaning processes in manufacturing plants.	Planned savings of 10% in relation to the respective consumption of the previous year.	This project has been postponed for capacity reasons.
	Indirect cooling instead of using injection condensers or injection coolers to cool vapor phases.	Planned savings of 5% in relation to the respective consumption of the previous year.	This project has been postponed for capacity reasons.
	Use of wastewater-free processes for vacuum generation, phase 1: Identification of possible saving potentials.	Targeted goal: 50% reduction in operating wastewater per operating hour.	This project has been postponed for capacity reasons.
	Optimization of cooling water consumption by adjusting the compressed air production. Identification of possible saving potentials.	Targeted goal: 10% reduction in cooling water per operating hour.	Project completed.
	Reduction of evaporation losses at the cooling systems. Identification of possible saving potentials.	Targeted goal: 15% reduction of supplementary water per factory operating hour.	Completion of the analysis by 12/2022.
	Optimization of the quantities of water used to produce water for pharmaceutical purposes.	Planned savings of 10% in relation to the respective consumption of the previous year.	This project has been postponed for capacity reasons.
	Water consumption logistics center.	Examinations of the highly fluctuating consumption values.	Project starts in 09/2022.

Environmental program 2020–2022.

Waste	Measure	Goal	Deadline
Reduction of waste quantities	Optimization of the logistics of the internal PE film collection.	Improvement of occupational safety by reducing internal transports.	Result by 12/2022.
	Optimization of the reconditioning of completely emptied IBCs.	Increase of disposal safety by using an additional disposal operation.	Result by 12/2022.
	Establishment of an alternative disposal route for formic acid. Development of an alternative solution.	Creation of an additional disposal channel for recovery.	Project canceled. The personal-care business was sold. No more waste containing formic acid will be produced.
	Improvement of storage facilities for methyl formate (MF).	Safety.	Project canceled. The personal-care business was sold. No more waste containing methyl formate will be produced.
	Introduction of a uniform waste container concept.	Increased safety.	Project completed.
	Optimization of the disposal of rinsing liquids to increase the recovery rate.	Cost savings.	Result by 12/2022.
	Reduction of packaging waste of raw materials (together with purchasing).	Reduction of the amount of waste.	Analysis in progress.

Declaration of validity.

The signatory EMAS environmental assessor, Dr. Axel Romanus (DE-V-0175), accredited for the areas 20/21, confirms that he has assessed the Norderstedt factory of Schülke & Mayr GmbH, registration number DE 150-00003. He certifies that the company fulfills all requirements of Directive (EC) No. 1221/2009 of the European Parliament and Council of November 25, 2009, supplemented by the requirements of Regulation (EU) 2017/1505 of August 28, 2017, and Regulation (EU) 2018/2026 of December 19, 2018, for the voluntary participation of organizations in a combined system for environmental management and environmental company auditing (EMAS), as shown in this environmental statement.

The site address as per EMAS is: 22851 Norderstedt, Robert-Koch-Straße 2.

By signing this statement, he confirms that:

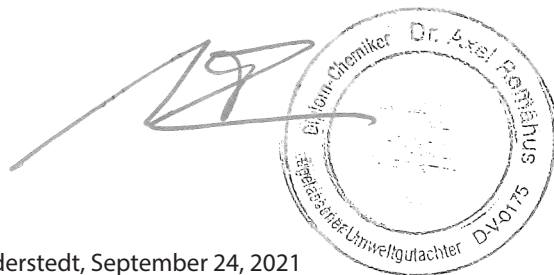
- the assessment and validation were carried out in complete compliance with the requirements of regulations (EC) No. 1221/2009, supplemented by the requirements of Regulation (EU) 2017/1505 and (EU) 2018/2026,
- the results of the assessment and validation confirm that there is no evidence of non-conformity with applicable environmental regulations, and
- the data and information presented in the environmental report provide a dependable, credible and true presentation of all activities of the organization.

This statement is not equivalent to an EMAS registration.

The EMAS registration can only be granted by a competent authority in accordance with Directive (EC) No. 1221/2009. This statement cannot be used as an independent basis for briefing the public.

The next consolidated environmental statement will be created for May 2023.

An updated environmental statement is published and validated annually.

The image shows a handwritten signature in black ink, which appears to be 'AR', written over a circular official stamp. The stamp is a seal of the 'Bayerischer Chemiker' (Bavarian Chemists) and contains the text 'Dr. Axel Romanus' at the top, 'Bayerischer Chemiker' on the left, 'Umweltgutachter' at the bottom, and 'DE-V-0175' on the right. The center of the stamp features a stylized graphic of a hand holding a globe.

Norderstedt, September 24, 2021

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Environmental Auditor (DE-V-0175)
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24235 Laboe, Germany

Imprint.

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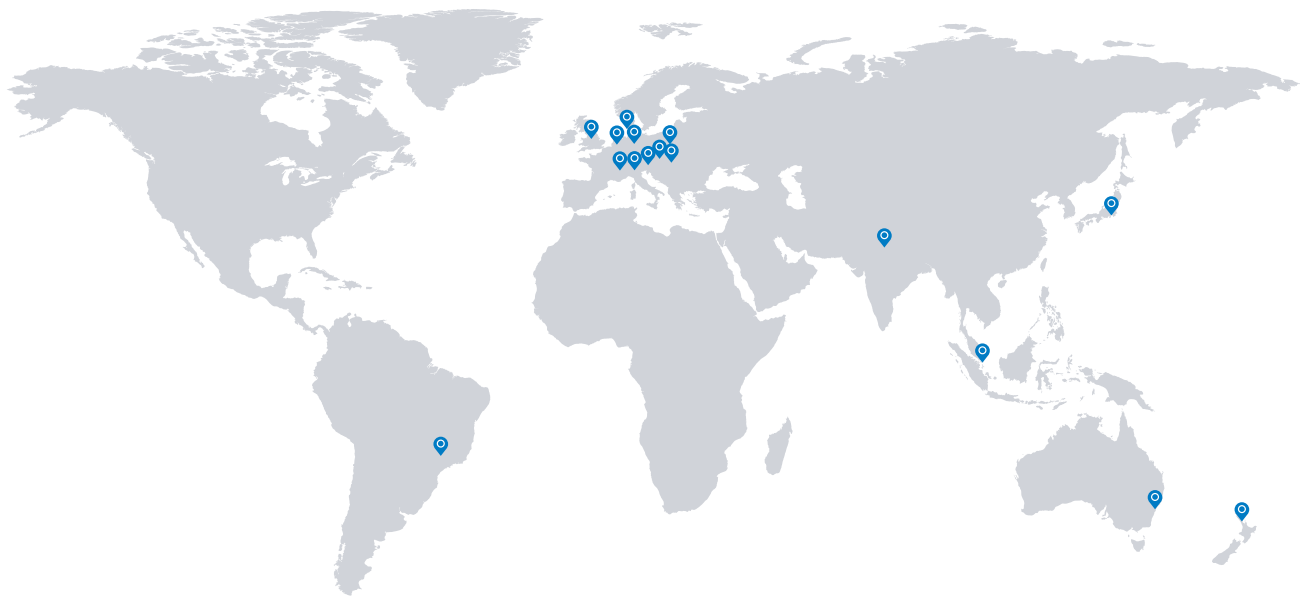
Layout

Jahreszeiten Verlag Content Solutions, Hamburg

Updated: July 2022

schülke group

we protect lives worldwide



schülke is present with over 20 subsidiaries and production sites in Germany (schülke), France (Bioxal) and Brazil (Vic Pharma). Companies with specific fields of application and markets such as Prosenio GmbH, Vesismin Health and Wet Wipe A/S are also part of the schülke Group.*

* As of September 2022

More information at www.schuelke.com

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