

LEDiL

Sustainability Report



2022

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About LEDiL

Our story is one of continuous discovery. Since our beginnings in 2002, we set out on a mission to perfect light for a luminous future – for humankind and the life around us.

With every customer case, we advance the quality of LED light by continuously challenging our competence and pushing the boundaries of innovation.

Our state-of-the-art optical solutions help create light that enhances wellbeing, functionality, safety and sustainability. Whether we work on indoor or outdoor lighting, we have the experience and technological know-how to achieve extraordinary results in a wide range of applications.

Together with our customers and partners, we enable and strengthen a shared ecosystem of light; because we know that no one can achieve a better future alone.



CEO words

2022, humanity and democratic values face challenges

After a successful transformation journey LEDiL continued strongly in accordance with a re-focused strategy and business plan including ambitious targets for 2022. Unfortunately, the Russian invasion of Ukraine astonished the entire world in Q1 2022. As LEDiL Group is committed to living by our values we strongly condemned the military aggression by Russia. As well as causing unnecessary deaths and irreversible damage to society and the economy, it has become impossible to conduct business in the affected areas.

Despite the distressed geopolitical landscape, COVID lockdowns, and logistics challenges, 2022 was a good year for LEDiL. Even though our distributor channel sales were impacted by our partners' global cautiousness in maintaining sufficient inventory levels in the second half of 2022, we maintained solid double digit growth

in our direct sales channel with sustainable profitability.

Furthermore, we continued to live according to our values while further addressing our sustainability objectives. We exceeded our goals, and I am thankful for the commitment and responsibility that LEDiL's team members have continued to show during 2022.

Achieving our strategic, financial, and sustainability goals is key to generating the returns required to develop our company further; and I continue to underline, these goals are not just for the management team, but for the entire LEDiL Group. LEDiL leads the way in enhancing the efficiency and performance of LED lighting, reducing the climate impact of lighting even further, increasing wellbeing, improving safety, enhancing functionality, and even helping to grow food sustainably with a smaller footprint - with less lumens, less watts, less material, and less energy.

Our sustainability focus areas continue to be climate impact reduction in the value chain and

employee wellbeing, while maintaining ethical business practices, policies that also extend to our subcontractors' operations.

While I am grateful to our valued and demanding clients, I would like to end by thanking all LEDiL team members who contribute to LEDiL's development every day. Without you, neither the financial results nor sustainability objectives could be achieved.

Let's continue to make progress together.



Petteri Saarinen
CEO

At the core of our business

Our mission

Perfecting light for
a luminous future.

Our values

Customer benefit
In this together
Competence
Inspiration
Respect

Our vision

To enhance wellbeing,
functionality and safety for
a more sustainable future and
improved quality of life.



Inspiration

"We are curious and inspiration
is the source of our innovation"



In this together

"One LEDiL, one team, one goal"



Respect

"We value people and believe
that mutual respect is about
appreciation, fair treatment and
consideration for all"



Competence

"We take pride in our profession and
are dedicated to climbing the
mountain of knowledge"



Customer benefit

"Creating real benefit for all
customers is at the core of
everything we do"

LEDiL sustainability in brief

Lighting is responsible for approximately 20 %* of global energy consumption and hence can play a key role in solving the global climate challenge.

At LEDiL, sustainability is an essential part of our core business logic: LEDiL products are instrumental in ensuring efficiency and performance of LED lighting, reducing energy consumption and helping to provide sustainable light, which increases wellbeing, improves safety, and even helps grow food with a smaller footprint: with less energy and hazardous waste, which is caused by traditional light sources. LEDiL's view and commitment to sustainability has been documented in the company's Code of Conduct, which establishes the LEDiL company standards for ensuring

safe working conditions, equal and respectful treatment of employees, and environmentally responsible and ethically conducted business operations. Our prioritised sustainability focus areas are climate impact, sustainable and responsible operation, and employee health and safety. To meet social responsibilities and to achieve success in the market, LEDiL adheres to the highest ethical standards, and we aim to extend this goal to our supply chain. Our code of conduct and related policies are applied in our own, and our subcontractor's operations, building the foundation for LEDiL sustainable performance.

At LEDiL we are committed to upholding the human rights of workers, and to treating them with dignity and respect as understood by the international community. We believe, that in addition to minimizing the incidence of work-related injuries and illnesses, a safe and healthy working environment enhances the quality of products and services, the consistency of production, and worker retention and morale.

We recognize that environmental responsibility is essential for producing world class products and operating globally. In manufacturing operations, adverse effects on the community, environment and natural resources must be minimized while safeguarding the health and safety of the public. LEDiL has a documented environmental system that has been certified according to ISO 14001.

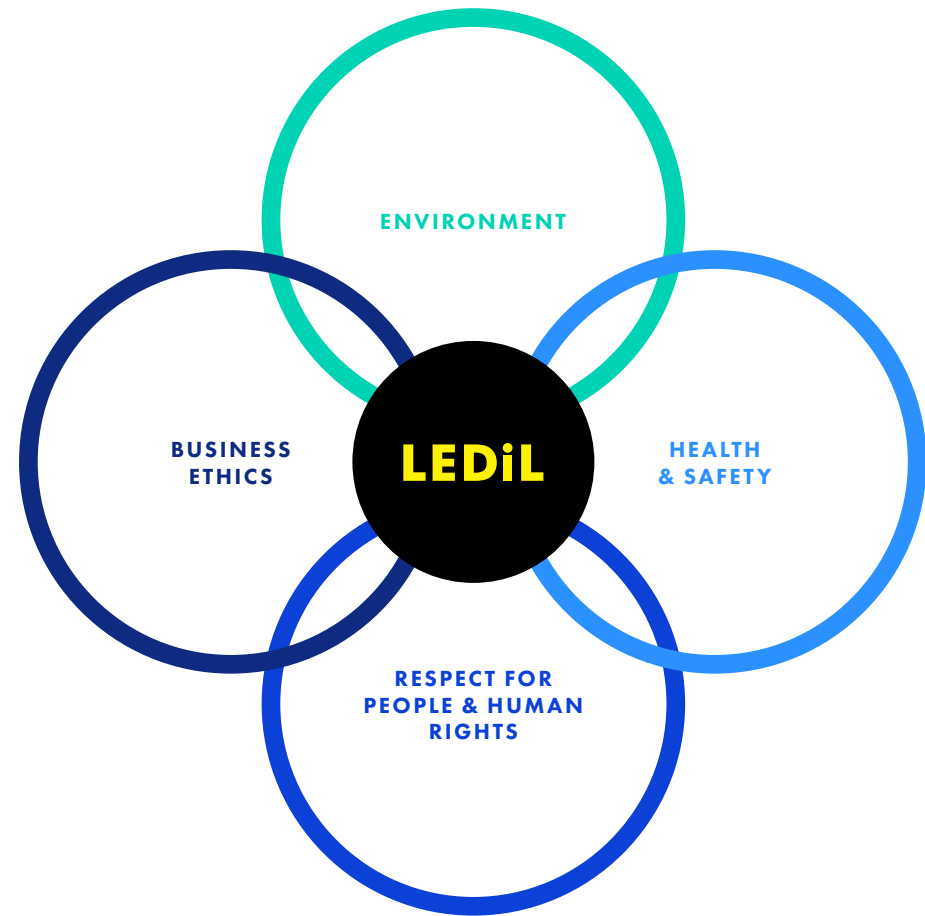


*International Energy Agency (IEA) (2023). Global energy consumption for lighting. Retrieved from <https://www.iea.org/reports/lighting>

LEDiL sustainability in brief

This report continues on the foundation established by the 2017 report outlining LEDiL's sustainability approach, key results and main activities.

The focus areas have been defined based on materiality analysis. The GRI standard has been used as inspiration and a source for essential topics. Our business strategy places high importance on reducing emissions, and this commitment is reflected as an integral part of this report.



Material sustainability topics and our focus

The environmental, social and economic topics relevant to our business are based on various stakeholder interactions and the result of a questionnaire.

LEDiL firmly advocates for the United Nations Sustainable Development Goals as part of the 2030 Agenda for Sustainable Development. Four key goals have been identified that will steer LEDiL business strategy and sustainable development goals.

13 CLIMATE ACTION



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



7 AFFORDABLE AND CLEAN ENERGY



Material sustainability topics and our focus

The Environmental impact of LEDiL products and services

The positive environmental impacts of our products and services are related to LED lighting energy saving and reducing hazardous substances found in traditional lighting i.e. FL (fluorescent lamps) and HID (high intensity discharge) lamps, as well as enhancing the efficiency of special applications and reducing environmental footprint e.g. in horticultural applications. The use of our products can directly contribute to reducing light pollution and its negative effects on biodiversity.

Our products are designed to further enhance the energy savings of LED lighting by focusing radiated light energy of efficiently on the designed target where it is needed.

Modularity is the basis of our design ideology which allows us to combine fewer parts and tools into a large number of tool combinations

and end products, reducing the need for producing, transporting and warehousing large numbers of end products, and reducing the total amount of different molding tools.

With our wide range of standard products and custom product design services and support we help luminaire manufacturers in developing optimal solutions for better quality and more efficient lighting.

LEDiL operation's environmental approach focuses on fulfilling environmental compliance, ensuring efficient material and energy usage, appropriate handling and reduction of waste and reducing our carbon footprint.

LEDiL sustainability focus areas



Environmental compliance



Emissions in logistics chain



Employee wellbeing and safety



Ethical business practices



Responsible supply chain

Environmental compliance

Our environmental compliance is based on ISO 14001 standard. Currently we hold ISO 14001:2015 certificate which was recertified by DNV in May 2021. We constantly maintain and develop our environmental management system. All our products are REACH and RoHS compliant.

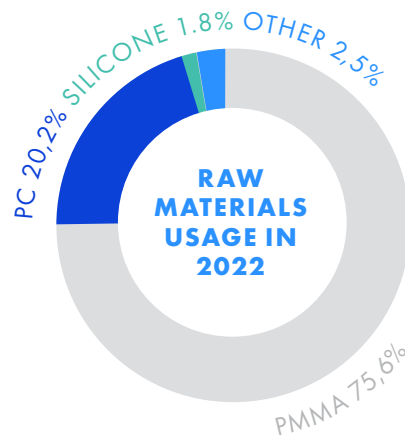


Environmental compliance

Materials

LEDiL's designed LED secondary lenses and reflectors are produced from plastic and silicone raw materials. The benefits of plastic compared to glass, another optically competitive material are the lower price, lighter weight and lower energy intensive production process. The weight of optical plastic is 6 times lighter than optical grade glass.

Our aim in product design is to optimize raw material usage and hence reduce environmental loading and waste as far as possible. We actively test and study new materials to find more ecological solutions. All of our products manufactured out of PC or PMMA are fully recyclable. LEDiL's annual raw material usage in 2022 based on material purchasing was 906 tons (last year 1010 tons), shows in the graph below by material.



Environmental compliance

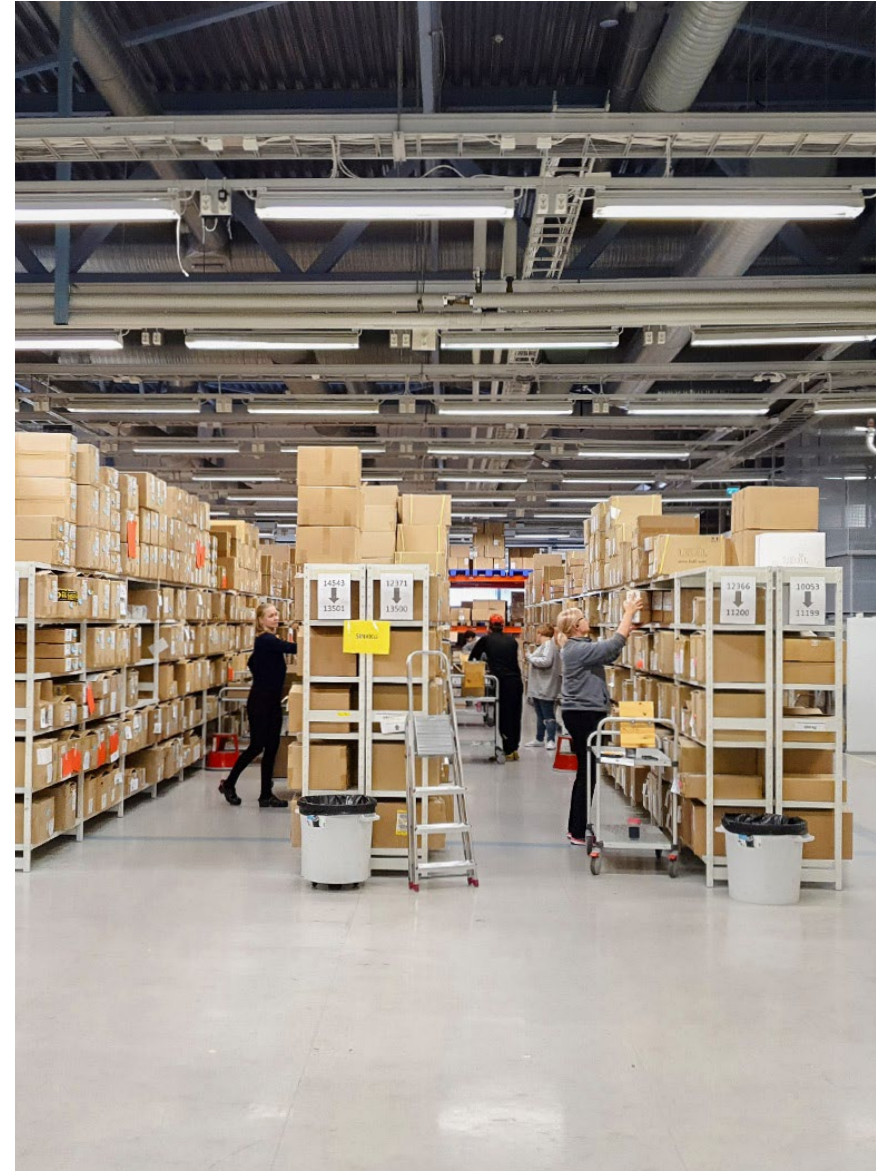
We constantly optimize the use of packaging materials by careful packaging design, taking into account product specific requirements and packaging material use, cost, and the effect on logistics and storage.

In 2018 the LEDiL warehouse in Salo, Finland, started using thinner plastic wrapping film which reduces wrapping film waste by 54 %. The utilization of recyclable plastic pallets since 2017 has reduced the mass of used pallets and made the operation more sustainable. This has a direct impact on freight related energy consumption emissions.

Packaging material usage	Tons		Ratio to sold units* *	
	2022	2021	2022	2021
Plastic packaging material (recyclable)	61,7	68,9	6,9 %	7,7 %
Carton packaging material (recyclable)	80,0	91,1	9,0 %	10,2 %
Wood pallets (EUR, reusable) *	14,2	14,0	1,6 %	1,6 %
Plastic pallets (reusable) *	21,3	14,6	2,4 %	1,6 %

* Goods handled through Ledil Oy

** Ratio to sold units = packing material weight (kg) / sold units weight (kg)



Environmental compliance

Energy

Our measurable in-house energy consumption is based on head office electricity consumption readings for facility, machinery and heating. The LEDiL office facility in Salo is equipped with solar panels and the building uses geothermal. The externally supplied electricity is 100% green energy and includes renewable as well as nuclear energy.

The main contributor to energy consumption in our value chain is the energy used in our supplier's injection molding factories. This part of our energy consumption can only be estimated from available literature and studies of energy consumption in injection molding together with production volume. Significant growth in production volumes led to the increase in estimated electricity use for injection molding.

Salo head office electricity use (kWh)	2022	2021
Total electricity use +	230 000	270 000
Solar electricity production for own use -	120 000	150 000
Net electricity use	110 000	120 000
 Energy consumption in production (MWh)	 2022	 2021
Estimated electricity use in injection molding	1 714	1 766

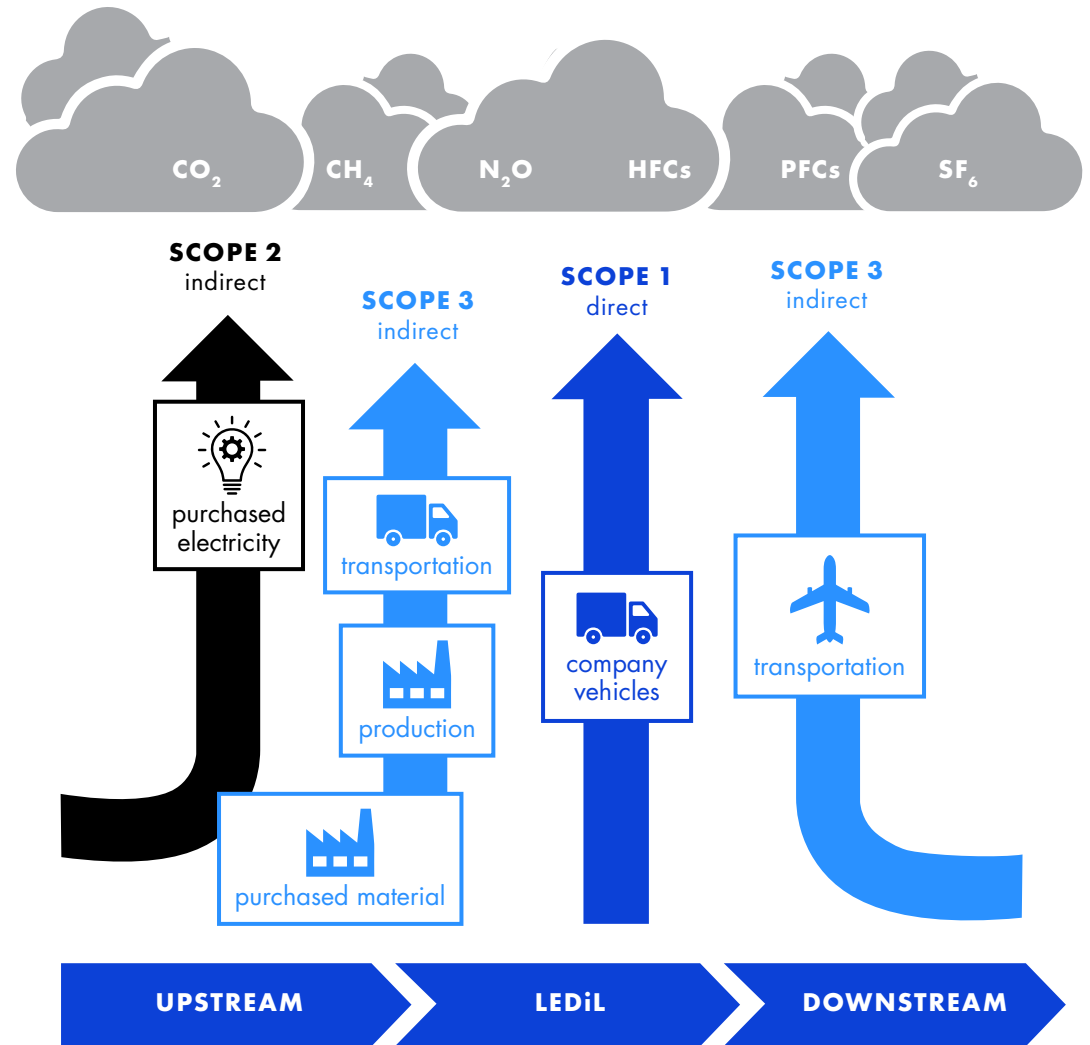


Environmental compliance

Emissions

From 2019 onwards LEDiL sustainability reporting has implemented a new calculation method for CO₂e reporting according to the Greenhouse Gas (GHG) protocol which divides emissions into 3 scopes and direct/indirect emissions. LEDiL's emission split into scopes 1–3 is shown in the picture below.

The direct emissions of our operations in scope 1 are limited to emissions from company vehicles. Emissions related to company facilities are due to purchased electricity which is reported as indirect emissions in scope 2. The emissions in the upstream of our supply chain in scope 3 are emissions due to the production of purchased raw materials, emissions due to production at suppliers, and transportation. In the downstream of our supply chain the emissions are mainly due to logistics.



Environmental compliance

LEDiL's GHG emission split into scopes 1-3

	2022		2021	
	tCO ₂ e	%	tCO ₂ e	%
SCOPE 1	1,6	0,0	1,6	0,0
Company owned vehicles	1,6	0,0	1,6	0,0
SCOPE 2	51,7	0,7	75,9	0,9
Purchased electricity for own use	51,7	0,7	75,9	0,9
SCOPE 3	7162,2	99,3	8 029,7	99,0
Logistics	1 296,9	18,0	1 863,1	23,0
Production of purchased materials	4 750,8	65,8	5 018,6	61,9
Production at suppliers	1 114,4	15,4	1 148,0	14,2
Total	7 215,5		8 107,2	

The main carbon footprint in our value chain is due to the production of plastic and silicone raw materials in the upstream and logistics emissions in the downstream. In 2022 we targeted a reduction of 20% in logistics emissions by increasing the amount of sea freight for internal goods transfers. The achievement was even higher, as we managed to reduce our logistics related emissions by 30% compared to 2021. In 2023, we target to further reduce logistics emissions by optimising our production footprint and increasing the share of sea freight for internal goods transfers. Additionally, train transportation will be explored as an alternative to air freight.



Environmental compliance

Waste

Our aim is to minimize the generation of waste in general, promote recycling, and minimize the amount of waste to landfill. Our primary efforts in waste management are focused on our main site and warehouse in Finland. In Salo head office waste sorting is every employee’s responsibility.

Our total waste volume is relatively insignificant, as it amounts to less than 20 tons.

Office spaces, the dining and break space, warehouse and laboratory are all equipped with appropriate waste sorting containers that enable easy sorting of paper, cardboards, bio-waste, metal, energy waste, security plastic, and packaging plastic.

Employees are instructed to use these sorting stations appropriately to optimize material circulation. Security destroyed plastics is mostly

scrapping of discontinued products as part of LEDiL’s product life cycle management.

The waste volume monitoring and reporting underwent a comprehensive reorganization in 2022, which renders the waste management figures not directly comparable to those of previous years. However, the upcoming 2023 sustainability report will provide comparable insights into waste management trends.

Waste by type in LEDiL headquarters Salo, Finland (tons)	2022
Carton (recyclable)	4,000
Security destroyed plastics (incineration)	2,900
Biowaste	2,352
Energy waste (incineration)	1,624
Plastic (incineration)	1,247
Recyclable paper	0,304
Hazardous waste	0,019
Metal	0,004
Total	12,450

Social and employee responsibility

LEDiL employee responsibility topics include employee wellbeing and safety, competence development, and employee satisfaction in a fast-growing organization.

The majority of LEDiL employees are based in the headquarters in Salo, Finland. In 2016, LEDiL established a subsidiary in Sycamore, USA. In 2019 LEDiL Ltd China was established and the logistics department Delivered in Hong Kong was acquired. Other areas outside Europe are represented by sales agents.

LEDiL employee data	2022	2021
Number of employees in the end of year	113	108
Share of women in employees	35 %	35 %
Share of women in the management team	9 %	9 %



Social and employee responsibility

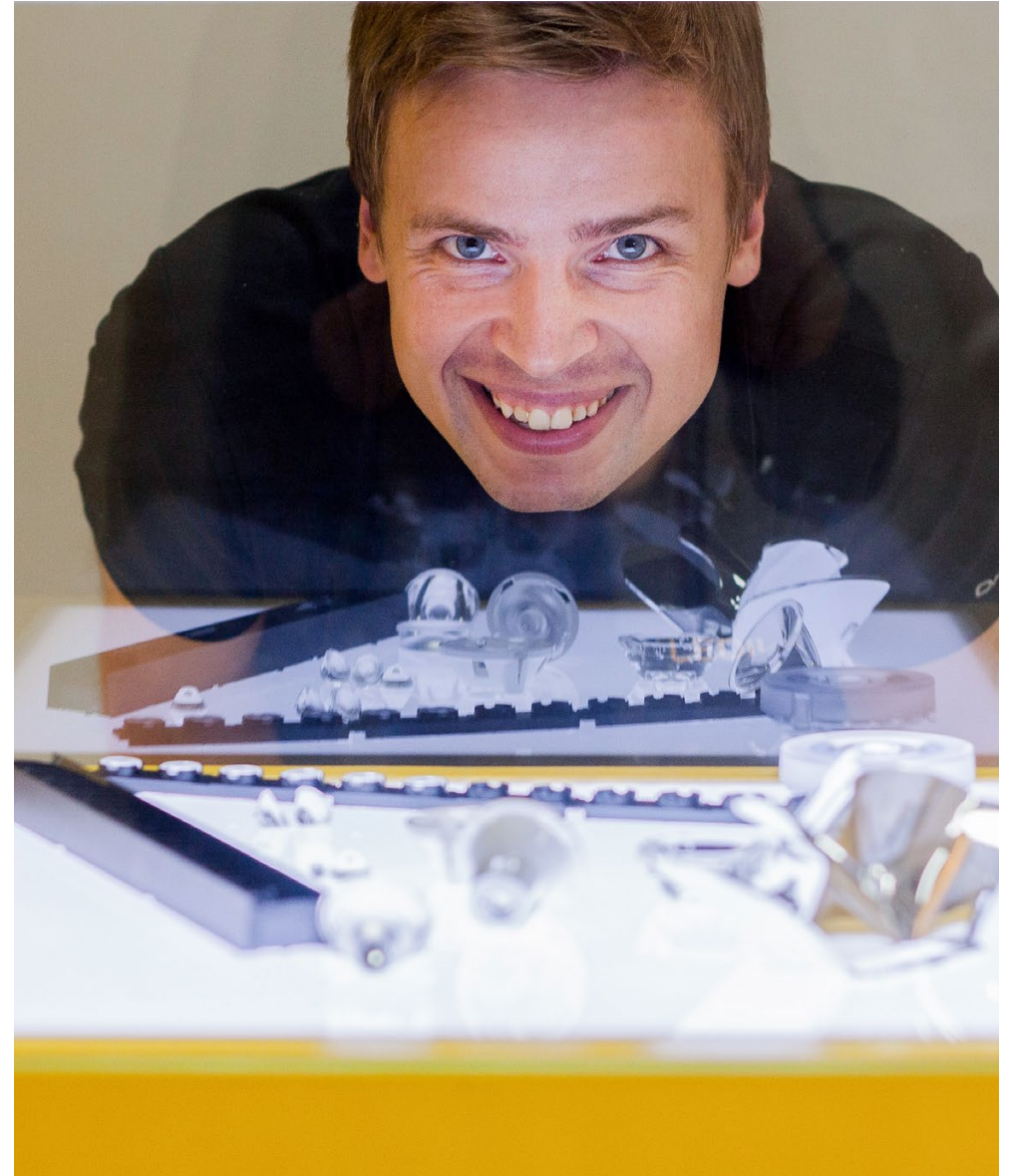
Employee wellbeing and safety

The primary objective at LEDiL is to offer employees a healthy and safe working environment. Our target is zero accidents annually. All new employees receive training in health and safety. A health and safety committee consisting of representatives from the employees, employer and HR meets regularly to follow up issues and take actions when required. Cooperation with the occupational health services provider is active and focuses on preventive measures and development of employee wellbeing. LEDiL's flexible ways of working and weekly sports activities help to improve and maintain employee wellbeing.

LEDiL key metrics for occupational health and safety

	2022	2021
Work related injuries	0 pcs	0 pcs
Sick leave rate	1,37 %	1,73 %
Employee turnover	5,0 %	7,0 %

We follow ISO 45001 standard principles in our OHS management. In addition health and safety requirements, including zero tolerance of discrimination, are defined in our code of conduct which we require our suppliers to adhere to.



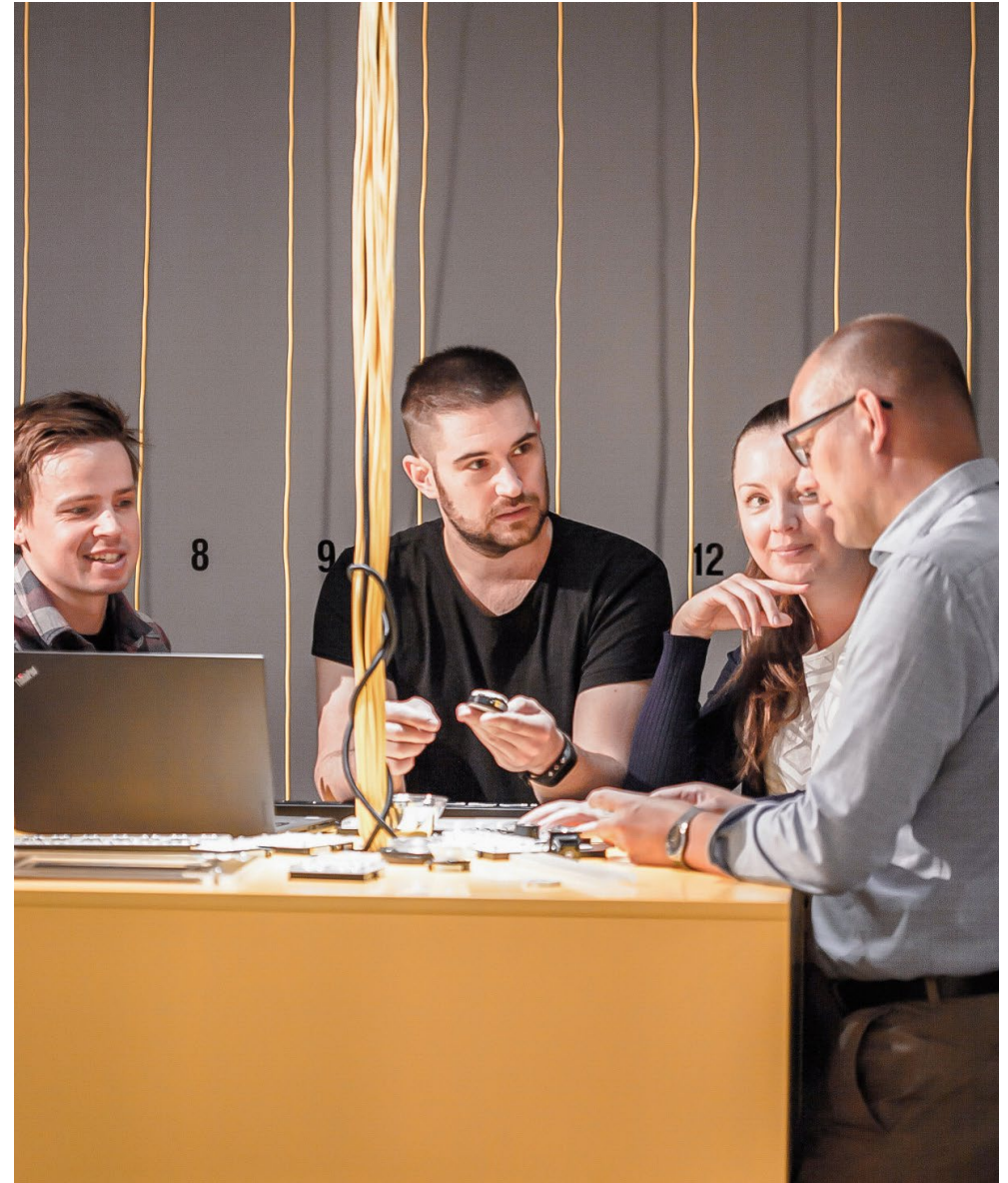
Social and employee responsibility

Competence development

Competent, innovative and motivated people are key to LEDiL's success. Staying ahead of the competition requires constant development as an organization and individual learning. As a foundation of competence development LEDiL is continuously mapping training needs and listening to employee's aspirations for personal and organizational development. Every employee has a development plan, objectives and a means of how to reach those objectives. LEDiL actively supports employees to improve individual and organizational performance.

Employee satisfaction

We aim to maintain and develop employee satisfaction continuously. The working atmosphere has been a key focus point at LEDiL. LEDiL has implemented flexible ways of working and a hybrid working method has been adopted with the purpose of serving as a foundation for a positive working atmosphere, wellbeing, and employee satisfaction. An employee satisfaction survey has been organized annually since 2018. In 2022 the survey results indicated that 94 % of LEDiL employees are very or quite satisfied with LEDiL as an employer. More focus has been put on communication and co-operation, further developing processes, clarifying roles and responsibilities and competence development.



Business ethics and anti-corruption

Compliance

We are committed to following all applicable environmental, safety, quality, and business-related laws and regulations. LEDiL code of conduct establishes LEDiL company standards for ensuring safe working conditions, equal and respectful treatment of workers, and environmentally responsible and ethically conducted business operations. The highest standards of integrity are to be upheld in all business interactions enforcing zero tolerance for corruption and bribery.

All LEDiL employees and sales agents have been trained in the code of conduct and anti-corruption, and the training rate is followed and reported in the LEDiL sustainability KPI. Every new employee is trained on these topics during the induction period. To be able to prevent and take actions in case of misconduct against the code of conduct, a Whistleblowing channel was established in 2018. The channel is an externally managed third-party service that enables anonymous reporting for all LEDiL employees and stakeholders.



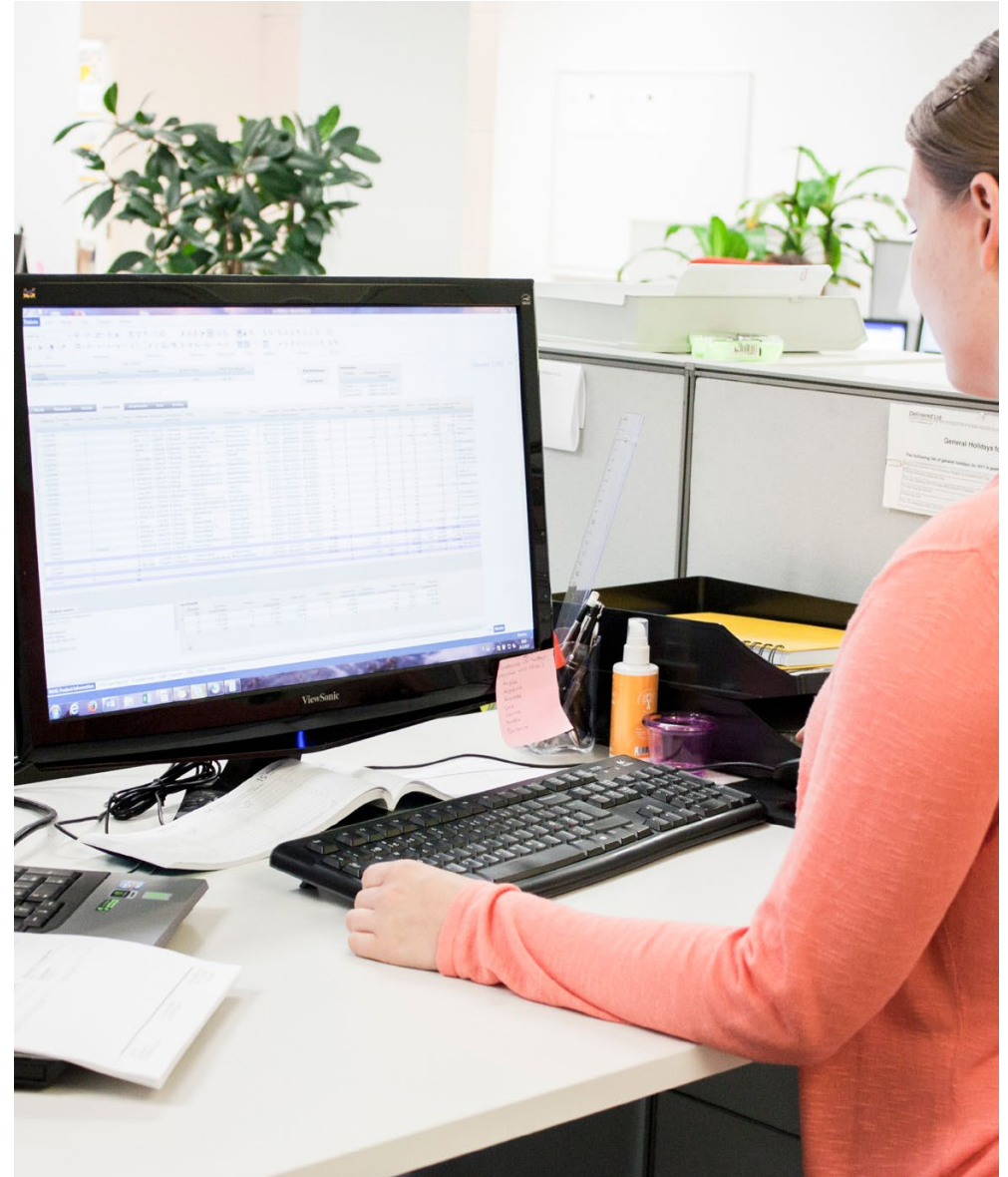
Business ethics and anti-corruption

Responsible supply chain

LEDiL is committed to conducting its business in a responsible and sustainable way and we expect the same commitment from our suppliers and business partners. By careful selection and evaluation of suppliers and partners, we ensure that quality, human rights, environmental, anti-corruption and other business ethics requirements are met. All suppliers have signed the agreement to LEDiL code of conduct in 2022 as targeted. During co-operation with the supply chain we evaluate the supplier's operations and compliance with agreed ways of working by on-site audits. Within our supply chain, we prioritize the safe and healthy handling, storage, and disposal of chemicals, which we actively monitor through routine supplier audits and visits. LEDiL and its suppliers are committed to the non-use of conflict minerals.

Data privacy

LEDiL is committed to protecting the required privacy expectations of personal information of everyone we do business with, including suppliers, customers, consumers, and employees. We carefully safeguard the confidentiality and availability of our proprietary information. We fulfill the requirements of the GDPR data protection regulation which came into force on 25th May 2018.



LEDiL sustainability KPIs 2022

5%

employee wellbeing,
employee turnover

100%

share of employees who have
attended sustainability courses

100%

share of suppliers who have subscribed
LEDiL code of conduct

1,37%

employee wellbeing,
sick leave rate

7216_{tons}

CO₂ emission
(scope 1-3)

2023 Outlook: setting our sights on the upcoming targets

<8%

employee wellbeing,
employee turnover

100%

share of employees who have
attended sustainability courses

100%

share of suppliers who have subscribed
LEDiL code of conduct

<1,75%

employee wellbeing,
sick leave rate

<7500 tons

CO₂ emission
(scope 1-3)

LEDiL
perfecting light

