

LEDiL®

LEDiL

Sustainability Report

2017



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LEDiL Group sustainability in brief

Lighting contributes approximately 25% of global energy consumption and hence lighting is in remarkable 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 and hence reducing energy consumption of lighting and helping to provide sustainable light which increases wellbeing, improves safety and even helps to grow food with 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 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 is to uphold the highest standards of ethics, 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 subcontractors' operations, building the foundation for Ledil sustainable performance.

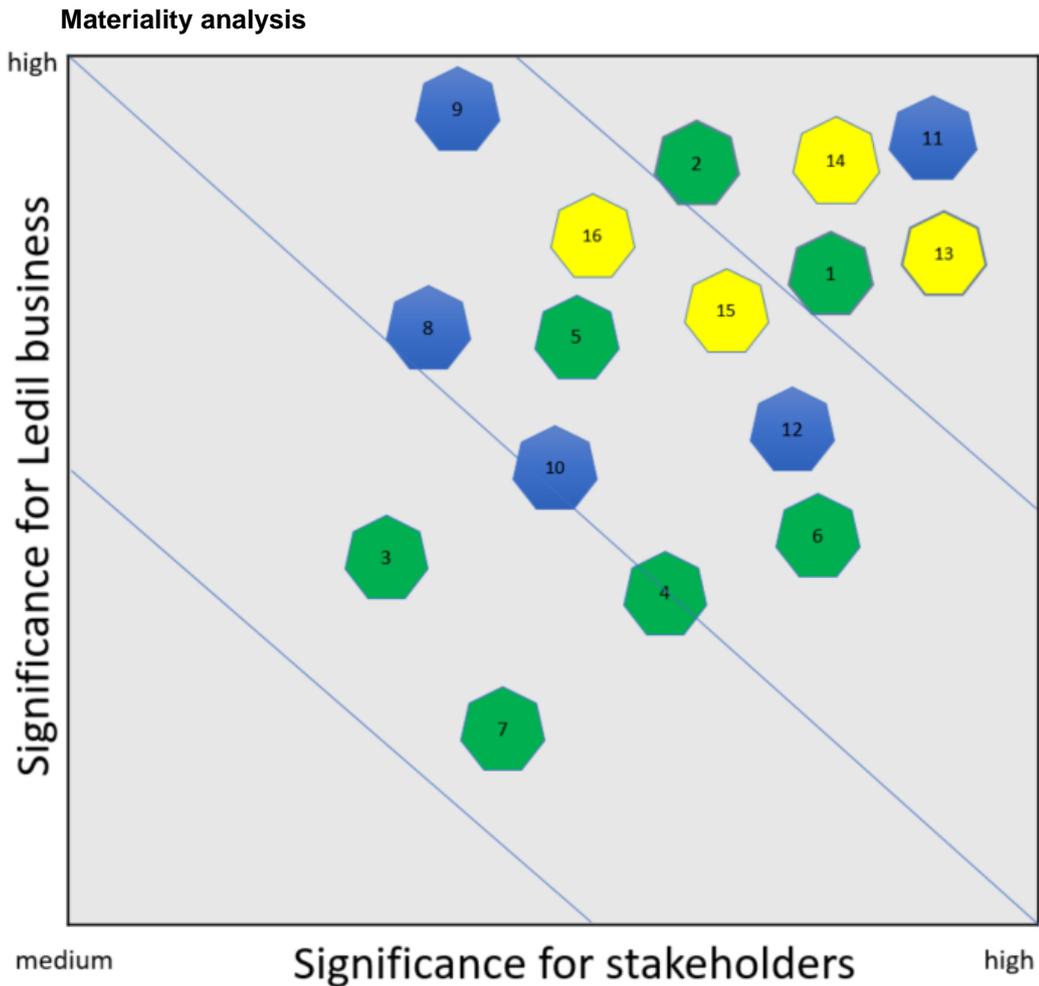
We at LEDiL are committed to upholding the human rights of workers, and to treat them with dignity and respect as understood by the international community. We believe, that in addition to minimizing the incidence of work-related injuries and illnesses, a safe and healthy working environment enhances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

We recognize that environmental responsibility is essential in producing world class products and operating globally. In manufacturing operations, adverse effects on the community, environment and natural resources are to 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.

This report outlines Ledil sustainability approach, key results and main activities. The focus areas have been defined based on materiality analysis. In this 2017 report we have started reporting numbers energy, CO2 and material usage which will be a starting point for sustainable development in the coming year. GRI standard has been used as inspiration and source for essential topics.

Material sustainability topics and our focus

A materiality analysis has been used to define the key sustainability topics and focus of Ledil. The environmental, social and economical topics relevant to our business are based on various stakeholder interactions, a questionnaire and comparing the input with significance to Ledil. Materiality analysis has been updated since last year for this report. The focus topics have remained the same.



- Environment
 - 1) Environmental compliance
 - 2) Emissions: logistics
 - 3) Emission: business travel
 - 4) Effluents and waste
 - 5) Use of material
 - 6) Use of chemicals
 - 7) Use of water
- Social responsibility
 - 8) Human rights and working conditions
 - 9) Committed and Competent workforce
 - 10) Diversity, equal opportunity
 - 11) Employee well-being and safety
 - 12) Safe products and services
- Corporate responsibility
 - 13) Ethical business practices, anticorruption
 - 14) Responsible supply chain
 - 15) Compliance
 - 16) Data privacy

Underlined material topics above have been selected as focus topics for Ledil Environmental responsibility

Impact of Ledil products and services

The positive impacts of our products and services on environment are related to energy savings by LED lighting, reducing hazardous substances compared to traditional lighting i.e. FL (fluorescent lamps) and HID (high intensity discharge) lamps and enhancing special applications efficiency and reducing environmental footprint e.g. in horticultural applications. Our products are designed to enhance further the energy savings of LED lighting by focusing the radiated light energy of LED efficiently to the designed target where it is needed. The cumulative energy savings of LED luminaires using Ledil components are equal to 2,8 TWh annually which is three nuclear power plants production.

Modularity is the basis of our design ideology which enables combining few parts and tools into a large number of tool combinations and end products and hence reducing need for producing, transporting and warehousing large number of end products and reducing total amount of different molding tools. By 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 better efficiency 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.

Environmental compliance

Our environmental compliance is based on ISO14001 standard. Currently we hold ISO14001:2008 certificate and constantly develop the environmental management system. We are currently updating to the latest version of the standard (ISO14001:2015) which will be certified by DNV in June 2018. In addition, all our products are compliant with REACH regulations and RoHS directive.

Materials

Ledil's designed LED secondary lenses and reflectors are produced from plastics and silicon raw materials. Benefits of plastic compared to other optically competitive material, glass, are lower price, lighter weight and less energy intensive production process. Our aim in product design is to optimize the raw material usage and hence reduce environmental loading and waste as far as possible. Our annual raw material usage in 2017 (based on sold products) is as follows:

Raw material use in 2017

Total product raw material usage	607	Ton
Material	Mass%	
Plastic(PMMA, PC, other)	98	%
Silicone	2	%

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

Packaging material use in 2017

	Ton
Plastic packaging material	65,7
Carton packaging material	55,8
Wood pallets(EUR, recycleable)*	32,5
Wood pallets(disposable)*	3,9

*amount handled through Finland main warehouse

Extensive packaging optimization activities carried out in 2016 have incurred savings in use and costs of packaging material and shipment costs. Cost saving calculation for 2016-2017 is presented below.



Energy

Our measurable in-house energy consumption is based on the head office electricity consumption readings for facility, machinery and heating. Ledil moved to larger premises in April 2017 which caused some increase in electricity consumption. However, the new facility is equipped with solar electricity panels with an annual capacity up to 170 000KWh and the building uses geothermal heating which decreases the electricity need for heating approximately by 70% compared to direct electrical heating. The externally supplied electricity is 35% renewable, 32% nuclear and 33% fossil energy.

Salo head office electricity use

Total electricity use +	311785	KWh
Solar electricity production for own use -	109989	KWh
Net electricity use	201796	KWh

The main source of energy consumption in our value chain is the energy used in the injection molding factories by our suppliers. This part of energy consumption can only be estimated by available information e.g. the number of products and known average energy use in injection molding.

Energy consumption in production

Estimated electricity use in injection molding	7 587 MWh
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Emissions

Our main environmental topics related to emissions are caused by logistics and electricity used in factories especially in China. Our production partners are located in China, Europe and US. Due to short lead time demand in the market and the aim to keep stock levels low our main shipping method is air freight. Sea freight is used as much as possible. The amount of sea freight has doubled every year since 2015 but proportion can still be improved. We aim to increase the usage of sea freight in the coming years. In China, electricity generation is 65% coal based which increases CO₂ emission compared to e.g. Finland where electricity is mostly renewable or CO₂ neutral, only 10% (total) coal based.

Estimated CO₂ emissions of main sources in 2017

Estimated CO ₂ emissions of air freight	3629	tCO ₂
Estimated CO ₂ emissions of production process power generation (China)	4766	tCO ₂
Estimated CO ₂ emission of head office electricity generation(external)	41	tCO ₂

Waste

Our aim is to minimise generation of waste in general, promote recycling and produce zero waste to landfill. Our primary efforts in waste management are focused to our main site and warehouse in Finland. In Salo main office waste sorting is everyone's responsibility. Office spaces, dining and break space, warehouse and laboratory are all equipped with appropriate waste sorting containers that enable easy sorting into paper, carton, bio-waste, metal, energy waste, landfill, security plastic and packaging plastic. Employees are instructed to use these sorting stations appropriately enabling as low as possible waste to landfill generation.

Waste by type in Ledil headquarters Salo, Finland

	2017	
Energy waste (incineration)	5980	kg
Security destroyed plastics (incineration)	3713	kg
Biowaste	3,6	m3
Carton (recyclable)	12	m3
Packaging plastic (recycleable)	35,7	m3
Landfill	20	m3

Chemicals

Regarding the use of chemicals, we follow health and safety regulations and our products comply to REACH regulations and ROHS directive. In our supply chain we pay attention to safe and healthy chemical handling, storage and disposal during regular supplier audits and other visits.

Social and employee responsibility

The employee responsibility topics of Ledil are employee wellbeing and safety, competence development and employee satisfaction in the fast-growing organization. To assure the development of human resources function an HR manager was hired and started in August 2017.

Number Ledil employees 2017

Number of employees in the end of 2017	113
Number of new hires in 2017	18
Share of women in employees	28%
Share of women in the management team	28%

The majority of Ledil employees are based in the headquarters in Salo, Finland. In 2016, Ledil has established a subsidiary in Sycamore, USA. Other areas outside Europe are represented by sales agents

Employee wellbeing and safety

Ledil wants to offer its employees a healthy and safe working environment. Our target in Ledil is zero accidents annually. All new employees receive a training for health and safety. A health and safety committee consisting of representatives of employees, employer and HR assembles regularly to follow up issues and take actions when required. Cooperation with the occupational health services provider is active and it focuses on preventive measures and development of employee wellbeing.

Ledil key metrics for occupational health and safety

	2017	
Work related injuries	1	pcs
Sick leave rate	2,6	%

We follow OHSAS 18001 standard in our OHS management. In addition, the health and safety requirements, including zero tolerance for discrimination, are defined in our code of conduct which we require also our suppliers operating in areas of high risk for employee safety and human rights, to adhere.

Competence development

Competent, innovative and motivated people are the key to Ledil's success. Staying in the front line of competition requires constant development of staff and learning of each individual. As the foundation of employee competence development Ledil has implemented regular development discussions and reviews. Every employee shall have development plan, objectives and means how to reach those objectives. Training needs are being mapped throughout the development discussion process.

Employee satisfaction

We aim to maintain and develop employee satisfaction continuously. The working atmosphere has been a key focus point and as one main action internal general work place rules from employee to employee have been created. Employee satisfaction survey has been scheduled to early 2018.

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 the 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 to the code of conduct and anti-corruption and the training rate is followed and reported as Ledil sustainability KPI (see page 9). Every new employee is trained to these topics during the induction training. To be able to prevent and take actions in case of misconducts against the code of conduct, an internal Whistleblowing channel is being prepared. Planned launch is in first quarter of 2018. The channel will enable both anonymous and identified reporting in an easy-to-use interface.

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. By careful evaluation and selection of suppliers and partners we ensure that the quality, human rights, environmental, anti-corruption and business ethics requirements are met. Our suppliers operating in risk areas for corruption, labour and environmental issues have signed Ledil code of conduct agreement. We follow and develop the share of suppliers having subscribed the Ledil code of conduct and have selected this as one sustainability KPI (see page 9). During co-operation we evaluate the suppliers operation and compliance to agreed ways of working by on-site audits. No compliance issues have been reported in audits during 2017. Ledil and its suppliers are committed to non-use of conflict minerals.

Data privacy

Ledil is committed to protecting the required privacy expectations of personal information of everyone they do business with, including suppliers, customers, consumers and employees. We are carefully safeguarding the confidentiality and availability our proprietary information. We are prepared to fulfill the requirements of GDPR data protection regulation which will become enforceable 25th May 2018.

Ledil sustainability KPIs 2017

- 1) Cumulative energy saving by products sold annually 2017 RESULT: 2,8 TWh
- 2) Share of employees who have attended sustainability courses 2017 RESULT: 97%
- 3) Share of subcontractors who have subscribed Ledil code of conduct 2017 RESULT: 67%

Ledil portfolio indicators

- i) Number of serious work-related accidents: 1
- ii) Share of production units with ISO 14001 certification (companies with own production): N/A
- iii) Does the company measure CO2 (yes/no)? NO (Estimations started in early 2018)
- iv) Does the company have a code of conduct implemented? YES
- v) Does the company have an external whistleblowing system implemented? (yes/no)? NO