ENVIRONMENTAL PRODUCT DECLARATION

enta300 MRL
in accordance with ISO 14025

MOVE BEYOND

Measuring the environmental performance of our products is the foundation for continuous improvement.

CONTENTS

EPD®

Program operator:
The International EPD® System:
more information is available on
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EPD® International AB
Box 210 60
SE-100 31 Stockholm, Sweden

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LIFTS (ELEVATORS), 2015:05,
VERSION 1.1 (2019-07-24)

Product classification:
UN CPC 4354 – Lifts, skip hoists, escalators and moving walkways

PCR review was conducted by:
The Technical Committee of the International EPD® System
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Independent verification of the declaration and data, according to ISO 14025:2006:
EPD® verification (external)

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About this EPD®

Introduction

At TK Elevator, we have a strong sense of responsibility towards our customers, employees, society and the environment. Our aim is always to develop solutions that go far beyond the industry standards in all these areas.

Within the context of sustainability, we want to understand the environmental performance of our products. That is why we develop Life Cycle Assessments (LCAs) to identify relevant fields of action and enhance the design process. Our goal is to minimize the environmental impact of our products. To communicate the results of LCAs to the public and ensure transparency regarding the environmental impact of our products, we publish EPDs.

The benefit for our customers is solutions that fulfil the highest demands in terms of efficiency and product responsibility. In addition, they can use EPDs in the context of their green building certifications and introduce elevators into the life cycle assessment of their buildings.

What is an EPD®?

An EPD® provides information about the environmental performance of a product. In the case of this publication, the results refer to TK Elevator's enta300 MRL elevator.

Development of this EPD

Both the EPD® and the underlying LCA study have been developed and third-party-verified in accordance with the product category rules (PCRs) for elevators within the framework of the International EPD® system and its general program instructions for type III environmental declarations according to ISO 14025.

Furthermore, development and verification also follow ISO 14040/44 and the calculation of the energy demand is carried out in accordance with ISO 25745-2. The characterization method used to calculate impact categories on midpoint level is CML2001, as requested by the PCRs.

Data collection

The data used in the present study is a combination of measured, calculated and estimated data. The main data sources are the internal data of TK Elevator, generic databases such as GaBi and data from Tier 1 suppliers.

Description of functional unit (FU)

According to the PCRs for elevators, the functional unit is defined as "transportation of a load over a distance, expressed in ton [t] over a kilometer [km] travelled, i.e. ton-kilometer [tkm]."

Comparability of results

EPD®s within the same product category but from different program operators may not be comparable.

Comparability within the same product category and program operator is only achievable, if the FU and the performance characteristics in Table 1 (usage category, travel height, number of stops, load, speed and geographical region) are equivalent.

KEY TERMS

Environmental product declaration according to ISO 14025: Type III environmental declarations provide quantified environmental data using predetermined parameters.

Life-cycle assessment (LCA) according to ISO 14040: "Compilation and evaluation of the inputs, outputs and the potential environmental impact of a product system throughout its life cycle."

Product category rules (PCR) according to ISO 14025: "A set of specific rules, requirements and guidelines for developing Type III environmental declarations."

Functional unit (FU) according to ISO 14040: "The quantified performance of a product system for use as a reference unit."

REFERENCE STANDARDS

ISO 14040 (2006). Environmental management. Life cycle assessment. Principles and framework.

ISO 14044 (2006). Environmental management. Life cycle assessment. Requirements and guidelines.

ISO 14025 (2006). Environmental labels and declarations. Type III environmental declarations. Principles and procedures.

ISO 25745-2 (2015). Energy performance of lifts, escalators and moving walks. Part 2: Energy calculation and classification for lifts (elevators).

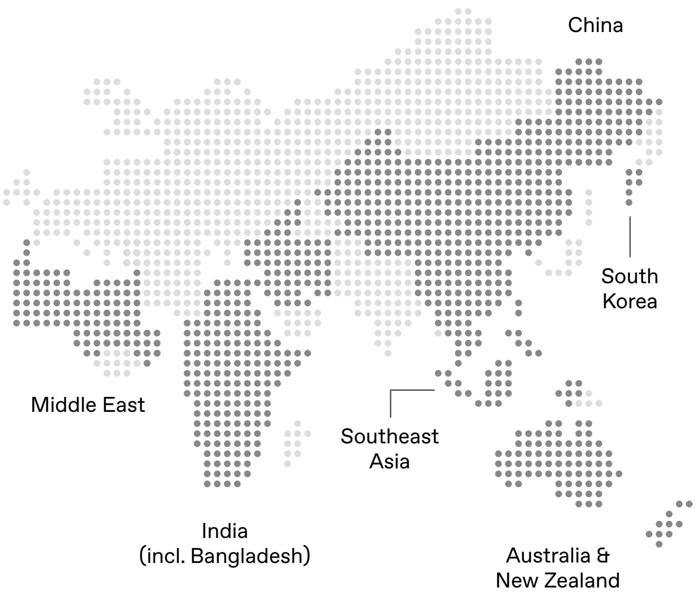

Elevator plant, Zhongshan, China

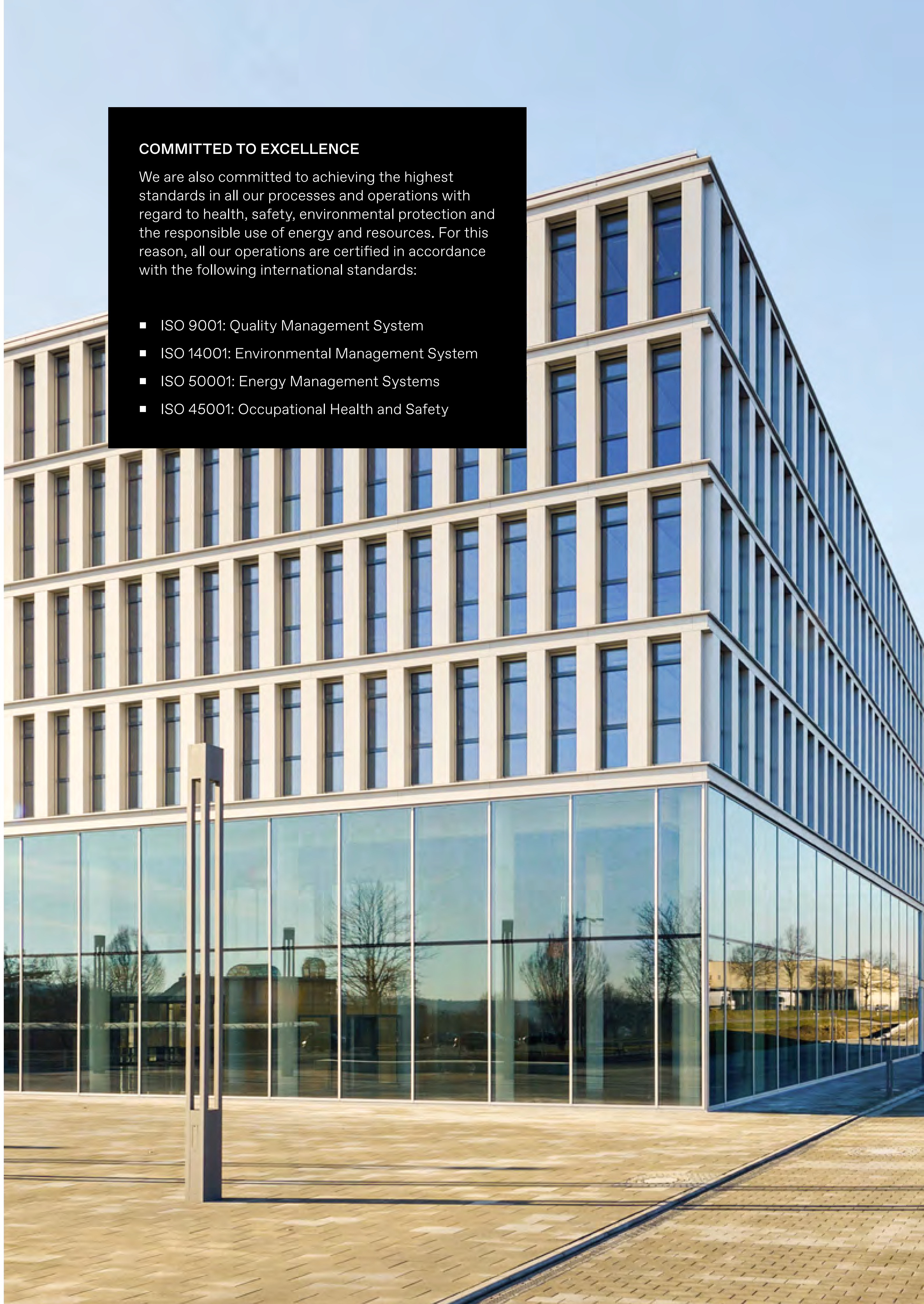
About us

With customers in over 100 countries served by more than 50,000 employees, TK Elevator achieved sales of around €8 billion in the fiscal year 2018/2019. Over 1,000 locations around the world provide an extensive network that guarantees closeness to customers.

Our customers are around the world, and our manufacturing footprint reflects this reality, extending from North and South America to Europe and the Far East. At each of these locations, we concentrate our expertise and experience on engineering and manufacturing urban mobility solutions, developing innovations and continuously optimizing existing products.

As a part of this network, our plant in Zhongshan, China produces enta300 MRL elevators to the highest quality standards customers expect from TK Elevator.





COMMITTED TO EXCELLENCE

We are also committed to achieving the highest standards in all our processes and operations with regard to health, safety, environmental protection and the responsible use of energy and resources. For this reason, all our operations are certified in accordance with the following international standards:

- ISO 9001: Quality Management System
- ISO 14001: Environmental Management System
- ISO 50001: Energy Management Systems
- ISO 45001: Occupational Health and Safety

The enta300 MRL elevator system

A heavy-duty machine room-less elevator for low to mid-rise applications which demand high-performance, enta300 MRL is the solution for infrastructure projects and multi-purpose buildings.

Unlimited possibilities

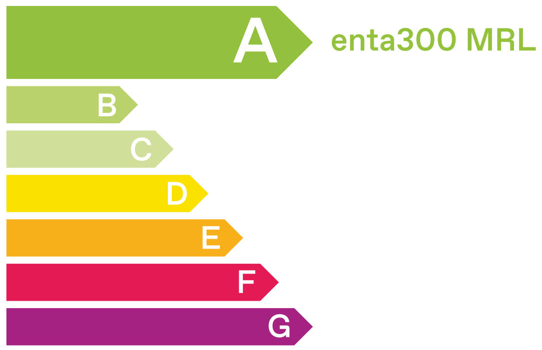
- **Realizes your vision**
  With German elevator engineering excellence plus innovative design and flexibility, enta300 MRL delivers the unique vision you have for your project.

- **Tailored to your needs**
  Whether by integrating intelligent management systems for your building or enhancing each passenger journey with infotainment, safety and security features, enta300 MRL is the passenger transportation solution that your project needs.

- **Gives a unique perspective**
  Demanding projects need outstanding design solutions, so enta300 MRL gives designers the freedom to customize and meet your unique challenges.

Energy efficiency

With this configuration, the enta300 MRL elevator achieves class A energy efficiency according to ISO 25745-2. This classification is based on the internal calculation carried out for the underlying LCA reference unit, and it is also influenced by capacity, usage-related parameters and energy-saving features.



Energy efficiency of the enta300 MRL elevator
(calculated for the reference unit specified in Table 1)

Committed to excellence

enta300 MRL elevator complies with all relevant international standards and regulations:

- EN 81: Safety rules for the construction and installation of lifts
  Part 20: Passenger and goods/ passenger lifts
  Part 50: Design rules, calculations, examinations and tests of lift components
- GB7588-2003+XG1-2015: Safety rules for the construction and installation of electric lifts

The enta300 MRL elevator system

enta300 MRL		
Index	**Representative values for the reference unit**	**Application range of the elevator model**
Type of installation	New installation	New installation or modernization
Commercial name	enta300 MRL	-
Main purpose	Transport of passengers	Transport of passengers and goods
Type of lift	Electric, without machine room (MRL)	-
Type of drive system	Gearless traction drive	-
Rated load [Q]	2100kg	630 to 5000kg
Rated speed	1.75m/s	Up to 2.5m/s
Number of stops	12	Up to 45
Travel height	56.6m	Up to 125m
Number of operating days per year	365	-
Applied usage category (UC) acc. to ISO 25745-2	6	1 to 6
Designed reference service life (RSL)	30 years with no modernizations considered	-
Geographic region of installation	China	-
Functional unit (FU), calculated acc. to PCRs expressed in ton [t] over a kilometer [km] travelled	62472.82 tkm	-

Table 1: Specification of assessed elevator according to the PCRs

Representative installation

The reference for the underlying LCA study was an elevator intended to be installed in a metro station in a Chinese unspecific location. Its configuration corresponds to the characteristics stated in table 1. For energy consumption during operation, the Chinese average grid mix was considered.

Value and relevance of functional unit (FU)

The FU is determined by the physical characteristics of the assessed elevator (e.g. rated load, rated speed, travel height) and parameters that are chosen based on its assumed use (e.g. use category, trips per day, operating days per year). Because the elevator is considered as installed in a metro station, use-related parameters in particular are high and consequently created a high FU value.

Content declaration

A detailed composition of the reference elevator in quantitative terms according to the PCRs is set out in Figure 1. This content declaration considers all life-cycle phases and cut-off rules according to the PCRs. Almost 90% of the material the elevator is made of belongs to the material category of ferrous metals. This includes mainly the guiderails and counterweight.

Inorganic materials, including for example the glass door panels, represent close to 4% of the total content. The category "electric and electronic"accounts for slightly above 2% of total weight. Among other elements, this includes the controller and the inverter. Other materials include those components for which the material contents cannot be established. The rest of the material categories account each for less than 2% including plastic materials, batteries and lubricating oil.

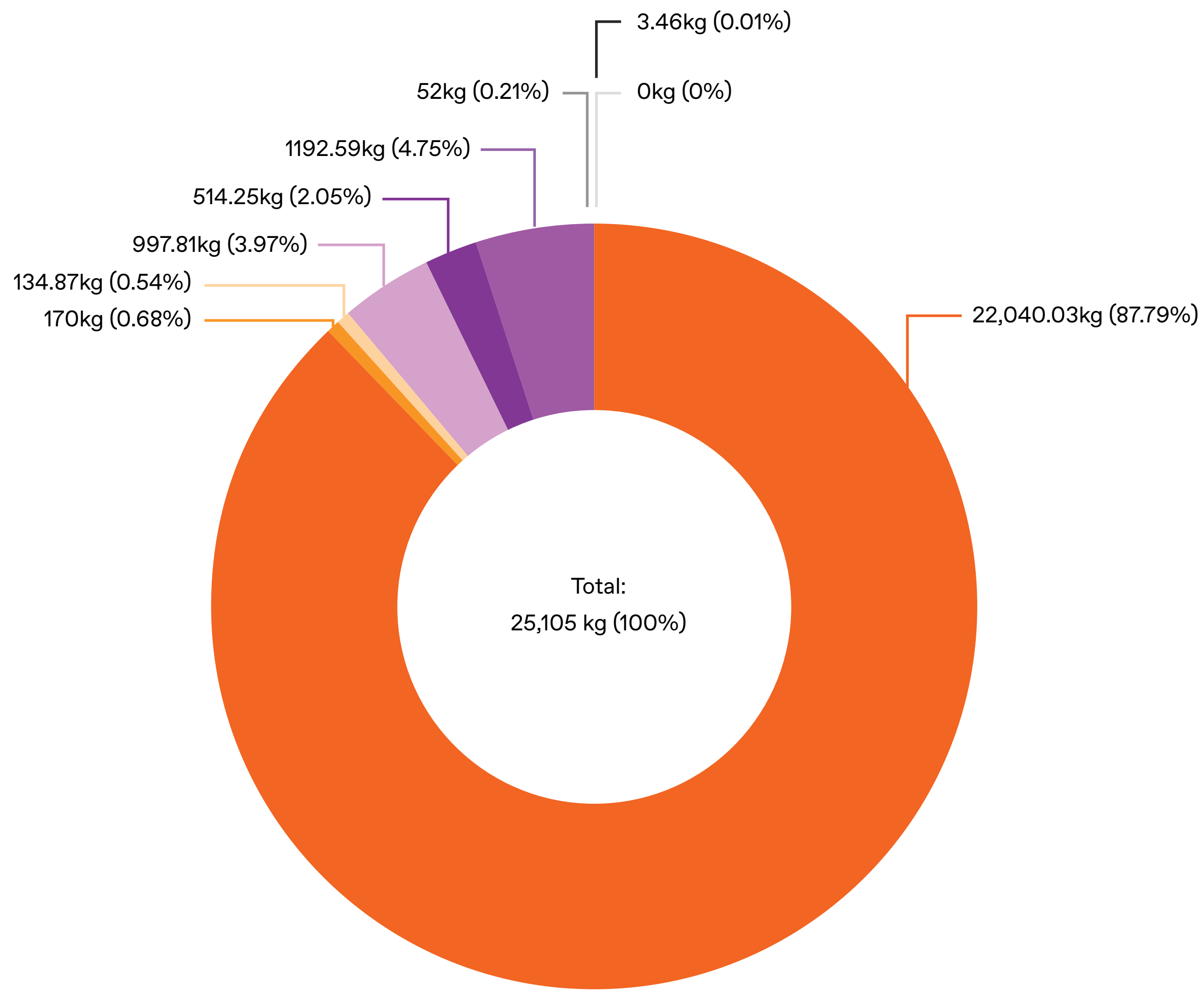


Figure 1: Material balance of assessed elevator (excl. spare parts)

- Ferrous metals
- Non-ferrous metals
- Plastics & rubbers
- Inorganic materials
- Organic materials
- Lubricants & paintings
- Electrics & electronics
- Batteries & accumulators
- Other materials

Life-cycle assessment

According to the PCRs, the life-cycle is assessed in three stages, each consisting of further information modules. The resulting system boundaries are presented in the figure below:

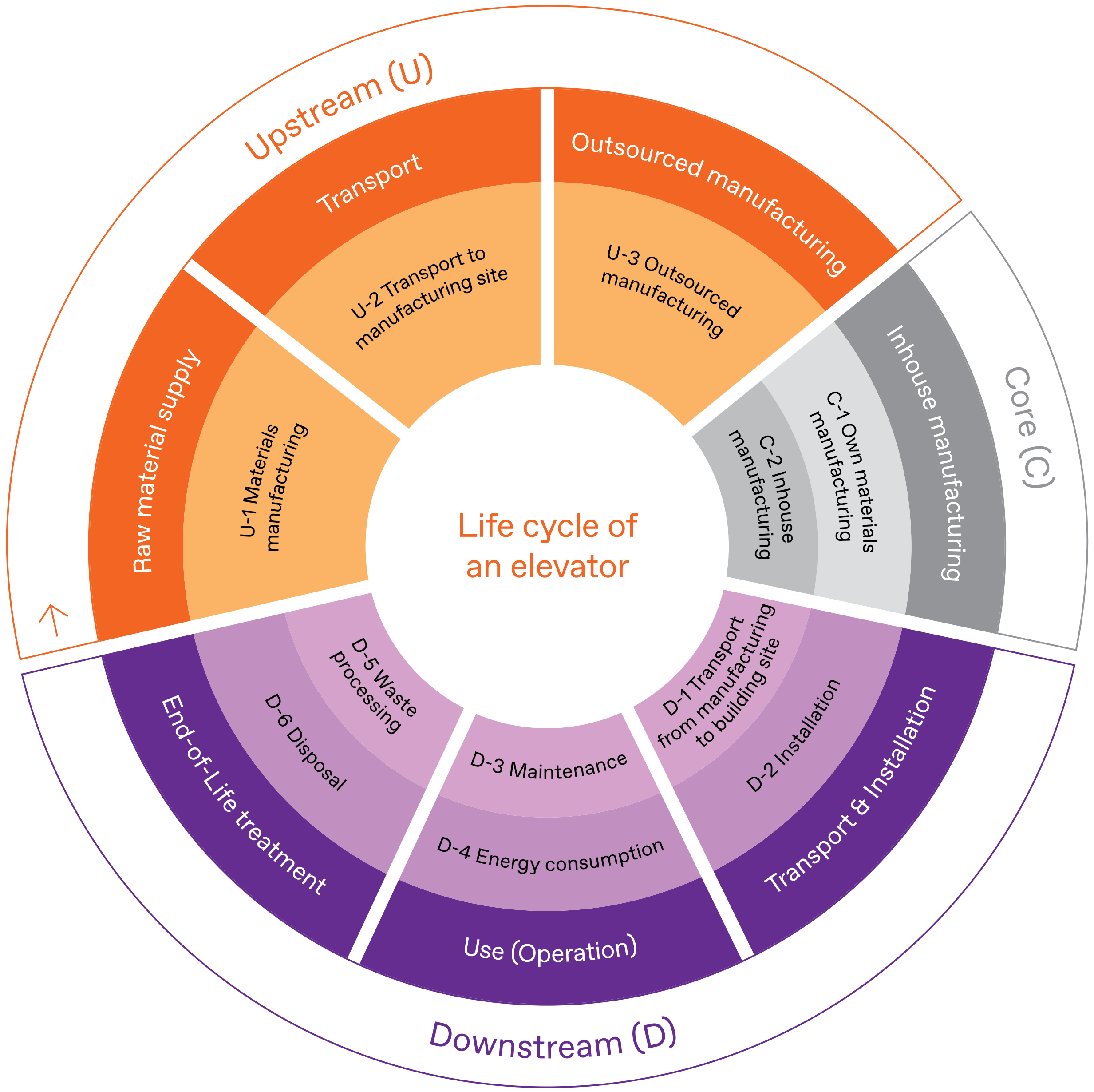


Figure 2: Life-cycle stages and respective information modules according to the PCRs

Results of the study

The following section contains the results of the underlying LCA study according to the PCRs. The disclosure of results is structured in three categories: potential environmental impacts, use of resources, waste production and output flows. The tables show results per FU (in grey fields) and in absolute figures for the full reference service life of 30 years (in white fields).

Potential environmental impacts

Results are presented below for six different impact categories. For a detailed description and explanation of each impact category, please read the glossary on page 19 of this brochure. The characterization method used to calculate the impact categories on a midpoint level is CML 2001.

Table 2: Impact category results by information module

	Impact category	GWP	AP	EP	POCP	ADP Elements	ADP Fossil fuels
Unit	FU	kg CO_2-eq./tkm	kg SO_2-eq./tkm	kg $(PO_4)^{3}$-eq./tkm	kg C_2H_4-eq./tkm	kg Sb-eq./tkm	MJ_{NCV}/tkm
	Abs.	kg CO_2-eq.	kg SO_2-eq.	kg $(PO_4)^{3}$-eq.	kg C_2H_4-eq.	kg Sb-eq.	MJ_{NCV}
Upstream	U-1 Material manufacturing	1.22E+00	4.10E-03	3.35E-04	4.88E-04	3.52E-05	1.31E+01
		7.62E+04	2.56E+02	2.09E+01	3.05E+01	2.20E+00	8.18E+05
	U-2 Material manufacturing site	1.92E-02	1.48E-04	2.05E-05	-5.46E-06	1.41E-09	2.55E-01
		1.20E+03	9.22E+00	1.28E+00	-3.41E-01	8.78E-05	1.59E+04
	U-3 Outsourced manufacturing	4.71E-02	1.26E-04	1.35E-05	1.89E-05	9.27E-09	1.03E+00
		2.94E+03	7.88E+00	8.42E-01	1.18E+00	5.79E-04	6.41E+04
Core	C-1 Own. Mat. manufacturing	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	C-2 In-house manufacturing	3.15E-03	2.37E-05	8.58E-07	1.43E-06	1.86E-09	5.14E-02
		1.97E+02	1.48E+00	5.36E-02	8.96E-02	1.16E-04	3.21E+03
Downstream	D-1 Trans. to building site	9.68E-03	9.70E-05	2.50E-05	-3.19E-05	2.32E-09	3.25E-01
		6.05E+02	6.06E+00	1.56E+00	-1.99E+00	1.45E-04	2.03E+04
	D-2 Installation	1.97E-02	1.92E-05	3.55E-06	4.79E-06	8.42E-10	4.82E-02
		1.23E+03	1.20E+00	2.22E-01	2.99E-01	5.26E-05	3.01E+03
	D-3 Maintenance	6.64E-03	2.58E-05	2.74E-06	3.39E-06	8.37E-10	7.01E-01
		4.15E+02	1.61E+00	1.71E-01	2.12E-01	5.23E-05	4.38E+04
	D-4 Energy consumption	5.79E+00	1.71E-02	1.63E-03	2.00E-03	4.37E-07	5.79E+01
		3.62E+05	1.07E+03	1.02E+02	1.25E+02	2.73E-02	3.62E+06
	D-5 Waste processing	1.74E-04	4.58E-07	9.57E-08	-1.26E-07	3.09E-12	2.31E-03
		1.09E+01	2.86E-02	5.98E-03	-7.85E-03	1.93E-07	1.44E+02
	D-6 Disposal	1.02E-03	3.57E-06	3.57E-06	-4.42E-07	1.09E-10	1.35E-02
		6.35E+01	2.23E-01	2.23E-01	-2.76E-02	6.79E-06	8.42E+02
	Total Life Cycle	7.12E+00	2.17E-02	2.04E-03	2.48E-03	3.57E-05	7.35E+01
		4.45E+05	1.35E+03	1.27E+02	1.55E+02	2.23E+00	4.59E+06

Impact category results by life-cycle stage per FU

The figures below show the share of the different life-cycle stages of each impact category in percentages, resulting in sum of 100 %.

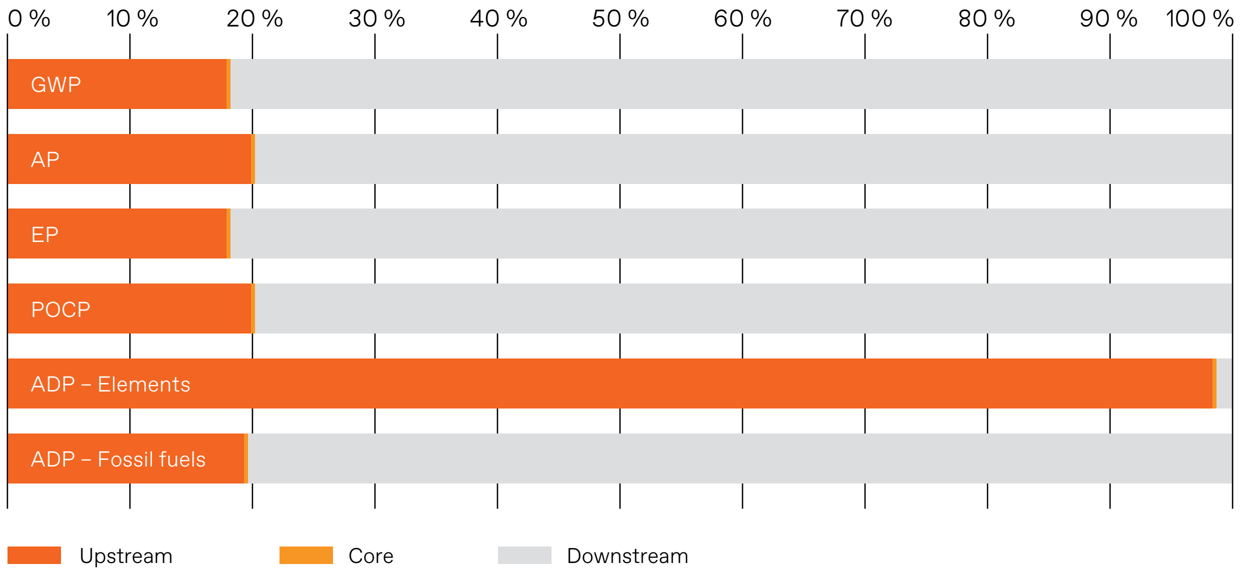


Figure 3: Impact category results by life-cycle stage (in %)

In the figure below, the impact results of the two largest contributors (U-1 and D-4) to the overall results are compared with each other and the sum of the rest of the information modules.

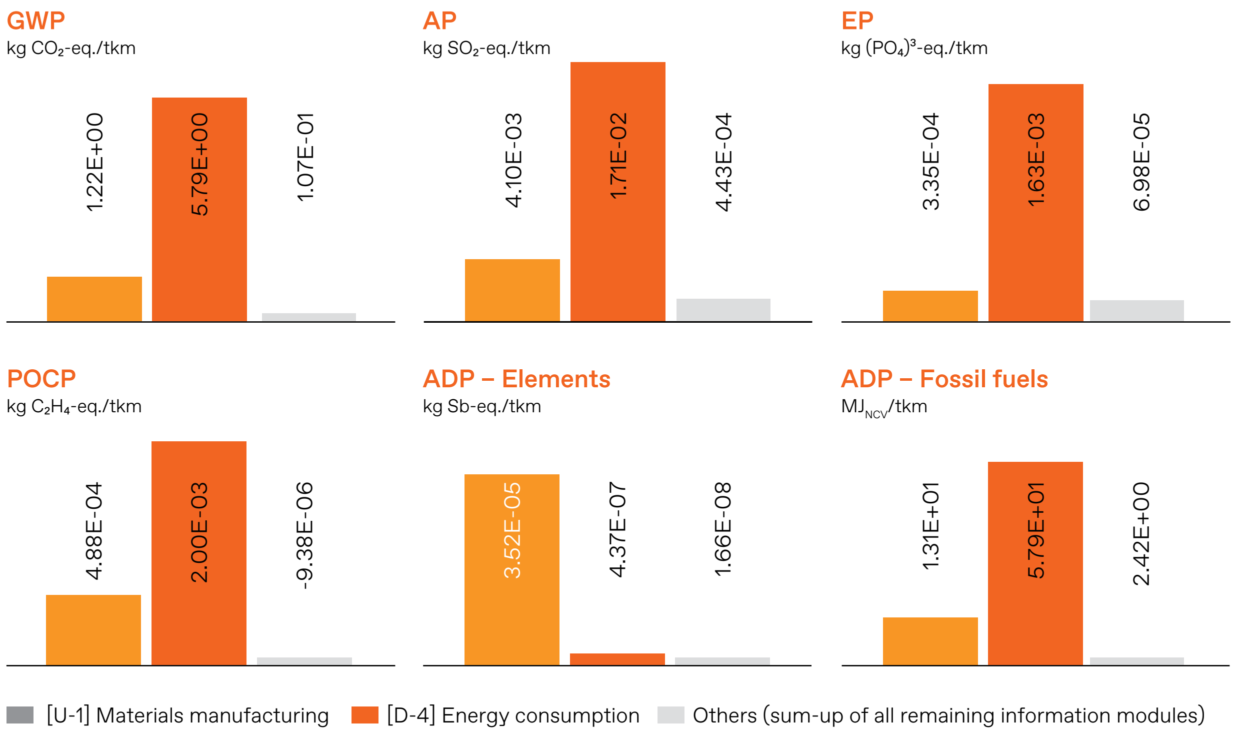


Figure 4: Comparison of impacts of main contributors

Use of resources

At this point the results for the use of resources are presented. These are divided into renewable and non-renewable as well as secondary resources, renewable and non-renewable primary energy, and water.

Table 3: Use of resources by information module

	Environmental indicator[1]	Non-renewable material resources	Renewable material resources	Non-renewable energy resources	Renewable energy resources	Secondary material resources	Total amount of water
Unit	FU	kg/tkm	kg/tkm	MJ_{NCV}/tkm	MJ_{NCV}/tkm	kg/tkm	m3/tkm
Unit	Abs.	kg	kg	MJ_{NCV}	MJ_{NCV}	kg	m3
Upstream	U-1 Material manufacturing	5.90E+00	4.56E+02	1.33E+01	7.63E-01	1.02E-01	4.72E-01
		3.68E+05	2.85E+07	8.33E+05	4.77E+04	6.38E+03	2.95E+04
	U-2 Material manufacturing site	1.22E-03	9.83E-01	2.56E-01	1.20E-02	0.00E+00	9.76E-04
		7.63E+01	6.14E+04	1.60E+04	7.50E+02	0.00E+00	6.10E+01
	U-3 Outsourced manufacturing	7.66E-02	3.01E+01	1.05E+00	7.51E-02	6.21E-05	2.96E-02
		4.79E+03	1.88E+06	6.56E+04	4.69E+03	3.88E+00	1.85E+03
Core	C-1 Own. Mat. manufacturing	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	C-2 In-house manufacturing	5.84E-03	2.13E+00	5.30E-02	5.04E-03	1.14E-07	2.10E-03
		3.65E+02	1.33E+05	3.31E+03	3.15E+02	7.10E-03	1.31E+02
Downstream	D-1 Trans. to building site	1.51E-02	6.10E+00	3.32E-01	2.15E-01	5.79E-05	6.05E-03
		9.45E+02	3.81E+05	2.07E+04	1.34E+04	3.62E+00	3.78E+02
	D-2 Installation	1.59E-02	4.67E+00	4.89E-02	6.64E-03	1.82E-05	4.64E-03
		9.96E+02	2.92E+05	3.05E+03	4.15E+02	1.14E+00	2.90E+02
	D-3 Maintenance	8.27E-03	4.06E-01	7.01E-01	5.97E-03	0.00E+00	3.92E-04
		5.17E+02	2.54E+04	4.38E+04	3.73E+02	0.00E+00	2.45E+01
	D-4 Energy consumption	5.52E+00	4.83E+03	6.08E+01	1.24E+01	0.00E+00	4.79E+00
		3.45E+05	3.01E+08	3.80E+06	7.76E+05	0.00E+00	2.99E+05
	D-5 Waste processing	1.22E-04	7.70E-03	2.31E-03	3.91E-05	0.00E+00	7.48E-06
		7.64E+00	4.81E+02	1.44E+02	2.45E+00	0.00E+00	4.67E-01
	D-6 Disposal	2.74E-03	2.51E-01	1.36E-02	5.13E-04	0.00E+00	2.45E-04
		1.71E+02	1.57E+04	8.51E+02	3.21E+01	0.00E+00	1.53E+01
	Total Life Cycle	1.15E+01	5.33E+03	7.66E+01	1.35E+01	1.02E-01	5.30E+00
		7.21E+05	3.33E+08	4.78E+06	8.44E+05	6.39E+03	3.31E+05

1 Environmental indicators "Secondary energy resources" and "Recovered energy flow" are not shown because their value = 0.00E+00.

Waste production

In this context the results for the generated waste, divided by hazardous and non-hazardous waste, are shown.

Table 4: Waste production by information module

	Environmental indicator	Hazardous waste disposed	Non-hazardous waste disposed
Unit	FU	kg/tkm	kg/tkm
	Abs.	kg	kg
Upstream	U-1 Material manufacturing	4.07E-06	1.10E-01
		2.54E-01	6.87E+03
	U-2 Material manufacturing site	9.83E-09	3.69E-05
		6.14E-04	2.31E+00
	U-3 Outsourced manufacturing	1.35E-09	1.71E-03
		8.43E-05	1.07E+02
Core	C-1 Own. Mat. manufacturing	0.00E+00	0.00E+00
		0.00E+00	0.00E+00
	C-2 In-house manufacturing	3.31E-11	2.28E-04
		2.07E-06	1.42E+01
Downstream	D-1 Trans. to building site	5.38E-10	5.40E-05
		3.36E-05	3.37E+00
	D-2 Installation	4.00E-10	5.89E-03
		2.50E-05	3.68E+02
	D-3 Maintenance	3.84E-08	1.19E-05
		2.40E-03	7.42E-01
	D-4 Energy consumption	4.20E-08	2.57E-02
		2.62E-03	1.60E+03
	D-5 Waste processing	1.57E-13	9.24E-08
		9.83E-09	5.77E-03
	D-6 Disposal	9.11E-11	1.84E-02
		5.69E-06	1.15E+03
	Total Life Cycle	4.16E-06	1,62E-01
		2.60E-01	1.01E+04

Analysis of results / Conclusion

General observations

The downstream stage is the most important contributor to the overall burden of the assessed elevator over its entire life cycle for five out of six assessed categories. It generates values of close to 80% or more for GWP, AP, EP, POCP, and ADP - Fossil fuels.

The upstream stage represents the second highest relative impact. It represents close to 99% of the overall burden for ADP-elements, being the second most significant stage for all other categories.

In contrast, the core stage has almost no impact and relevance in terms of the environmental burden.

Downstream“[D-4] - Energy consumption”

This information module dominates the downstream stage the most, and is the main contributor to overall environmental impact for most of the assessed categories. It generates values of 79% or more for GWP, AP, EP, POCP, and ADP - Fossil fuels. As a result, operation during the use phase thus significantly influences overall environmental impact due to the consumed energy.

The analysis of alternative use scenarios, in which the assessed elevator is operated in different locations, showed substantial differences in the overall results for most impact categories (GWP, AP, EP, POCP and ADP – Fossil fuels). These differences can be attributed to the variations between energy sources for different grid mixes. Consequently, the choice of grid mix needs to be carefully considered.

Upstream stage [U-1] - Materials manufacturing

This information module affects the upstream stage the most, causing almost all of its impact in all impact categories. It is by far the main contributor to ADP-elements, representing close to 99% of the overall burden in this category. For the rest of categories, it generates contributions from 16.4% (EP) to 17.9 % (POCP). The high impacts are mainly caused by energy intensive extraction and production processes of raw materials used for the different components of the elevator.

The high level of the results is mainly caused by components made out of carbon steel and other “Ferrous Metals”, which represent close to 90% of the total weight of the assessed elevator.

Nevertheless, in relative terms components with a high share of Electrics and Electronics (based on their specific impact per kg) have the highest impact on the results and are therefore of major relevance in the product life cycle.

Potential for improvements

The replacement of spare parts and use of ferrous metals, especially carbon steel, highly affects the impacts of [U-1]. In context of the spare parts, a suppression of the need for them by designing even more reliable components could have a positive effect on the environmental burden. With reference to the ferrous metals, the optimization of the weight of the steel components could provide another improvement to the results. In addition, in case of moving parts a reduction of weight results in a lower energy demand and in consequence an optimization of [D-4].

Explanation of negative values POCP for [U-2], [D-1], [D-5], [D-6]

In case of the Photochemical Ozone Creation Potential (POCP) the value for [U2] and [D-5] is negative. This negative impact is generated by the use of trucks as means of transport due to the division of NOX emissions into the two single emissions NO2 and NO. NO has a negative effect on POCP since it reduces close ground ozone formation.

Avoided burden

For the end-of-life phase, the cut-off approach was applied according to the PCRs [D-5 & D-6]. As a consequence, materials expected to be recycled or used for energy recovery are not granted a credit. Following this approach with regard to [U-1], no burden is associated with the amount of scrap included in certain primary materials used (e.g. scrap in steel datasets).

The avoided burden approach represents an alternative way of calculating the results for the end-of-life phase [D-5 & D-6]. Accordingly, a credit is awarded for the inherent recycling potential of a product in the end-of-life phase.

In the table below, the potential of this credit to reduce the overall environmental impact of the assessed elevator is estimated, taking into account the positive impact of using recycled rather than virgin material. However, new results for the total life cycle are not presented because a reliable net scrap calculation for the overall life cycle could not be performed.

For the calculation of the end-of-life phase [D-5 & D-6] using the avoided burden approach, a recycling rate of 20 % has been considered for steel components.

The estimated potential of the avoided burden shows that the chosen approach for the end-of-life phase has an impact on the overall results. Taking into account the avoided burden, the total life cycle impact could be reduced by up to 6% (ADP-elements).

Table 5: Estimate of potential of avoided burden – impact category results per FU

Impact category	GWP	AP	EP	POCP	ADP – Elements	ADP – Fossil fuels
Unit	kg CO_2-eq./tkm	kg SO_2-eq./tkm	kg $(PO_4)^{3-}$-eq./tkm	kg C_2H_4-eq./tkm	kg Sb-eq./tkm	MJ_{NCV}/tkm
Cut-Off Approach – Total Life Cycle in abs, Values	7.12E+0	2.17E-2	2.04E-3	2.48E-3	3.57E-5	7.35E+1
Cut-Off Approach – EoL phase [D-5 & D-6] in abs, Values	1.19E-3	4.03E-6	3.67E-6	-5.67E-7	1.12E-10	1.58E-2
Avoid, Burden App, – EoL phase [D-5 & D-6] in abs, Values	-1.21E-1	-2.30E-4	-1.26E-5	-5.73E-5	-2.05E-6	-1.12E+0
Potential Reduction of Avoided Burden – in abs, Values	-1.22E-1	-2.34E-4	-1.63E-5	-5.67E-5	-2.05E-6	-1.14E+0
Potential Reduction of Avoided Burden – in % of Total Life Cycle	-1.72%	-1.08%	-0.80%	-2.29%	-5.74%	-1.55%

Glossary

Glossary				
Impact category	Abbreviation	Unit	Characterization method	Description
Global warming potential (100 years)	GWP	kg CO_2-eq.	CML2001 – April 2015	The global warming potential (GWP) is a relative measure of how much heat a greenhouse gas traps in the atmosphere. It is indicated in kg of CO_2-equivalents for a specified time horizon.
Acidification potential	AP	kg SO_2-eq.	CML2001 – April 2015	The acidification potential describes the acid deposition in plants, soils and surface waters caused by the conversion of air pollutants in acid. It is expressed in kg of SO_2-equivalents.
Eutrophication potential	EP	kg $(PO_4)^{3-}$-eq.	CML2001 – April 2015	Eutrophication is the undesired enrichment of waters with nutrients. It induces the growth of plants and algae, which may result in oxygen depletion. At an excessive level it affects the biological balance of affected waters, e.g. through fish kills. It is measured in kg of C_2H_4-equvilants.
Photochemical ozone creationpotential	POCP	kg C_2H_4-eq.	CML2001 – April 2015	Photochemical ozone creation potential (also referred to as photochemical smog) quantifies the creation of ozone on ground-level where it is considered as a pollutant, while in the high levels of the atmosphere it protects against ultraviolet (UV) light. Ozone on lower levels is a harm to human health and can for example cause inflamed airways or damage lungs. It is expressed in kg of SO_2-equivalents.
Abiotic resource depletion potential – Elements & Fossil	ADP – Elements	kg Sb-eq.	CML2001 – April 2015	Abiotic resources are natural resources which are regarded as non-living. Their human depletion at the current rate is not considered as sustainable and cause of concern due to their scarcity. The depletion of abiotic resources is reflected in two separate impact categories: Elements, such as iron ore, indicated in kg of Sb-equivalents; and Fossil fuels, as for example crude oil, indicated in MJ_{NCV}.tion of abiotic resources is reflected in two separate impact categories: Elements, such as iron ore, indicated in kg of Sb-equivalents; and Fossil fuels, as for example crude oil, indicated in MJ_{NCV}.
	ADP – Fossil fuels	MJ_{NCV}	CML2001 – April 2015	

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