

Sustainability Report 2015

ELG HANIEL GROUP



FACTS AND FIGURES 2015

ESTABLISHED

1962

HEAD OFFICE

Duisburg, Germany

TOTAL TONNAGE

1.43 million metric tons

TURNOVER

EUR 1.83 billion

EMPLOYEES

1,247

LOCATIONS

50 operations
21 countries
5 continents

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INTRODUCTION

01 / 1 OBJECTIVE OF THIS REPORT

Two years have passed since ELG Haniel GmbH (“ELG”) released its first Sustainability Report. As announced before, the first report was the blueprint for reports that will follow in the upcoming years. After having published an update for 2014, which was based on our initial report of 2013 with updated facts and figures, we are now proud to present our second full report.

Over the last two years much has happened, but not only at ELG; the understanding of sustainability now finds significantly greater recognition in society and the economy alike.

As one of the leading recyclers of high-performance materials, we try every day to excel in our business – and by the same token in the impact we have on society and the environment. In our first report, we gave you a detailed insight into our daily business and how we determined our core areas in the greater sense of corporate responsibility. Our stakeholders pointed the way in this process.

It is possible that this report features aspects that appear familiar to you in light of previous publications. Our wish is to be transparent and consistent, so we pursue our goals and adjust them over time depending on our achievements.

Our focus is on four main aspects, namely Operations, Compliance, Employees and Commercial matters.

ELG’s Corporate Responsibility Team maintains constant communication with the CR department of ELG’s parent company Franz Haniel & Cie. GmbH (“HANIEL”). Our report and the core issues are closely coordinated with HANIEL and can partly be found in their recently published Annual Report. For more details see <https://www.haniel.de/en/>.

Also other HANIEL affiliated companies – like TAKKT AG (“TAKKT”; <http://www.takkt.de/en/sustainability/>), CWS-boco International GmbH (“CWS-boco”), METRO GROUP (“METRO”), and the latest addition to the Haniel Group, Bekaert Textiles N.V. (“BEKAERT”) – are fully awake to corporate responsibility and strongly committed to their respective sustainability targets. In case you are interested in their activities, their CR reports are available on the respective websites for downloading.

01 / 2 **REPORTING STANDARDS AND SCOPES**

This report was carried out in accordance with the GRI-G4 of the Global Reporting Initiative (GRI), which has its headquarters in Amsterdam, the Netherlands. The report is “In Accordance” with the GRI-G4 Guidelines – Core option.

The report follows the structure stipulated by the latest format of sustainability reporting to allow for maximum transparency and comparability. In essence, this structure aims to inform you about ELG in general and more specifically about subjects that have been identified as vital to us as the reporting body on the one hand, and to the stakeholders that are affected or potentially impacted by our activities on the other hand.

On the second last page, you will find the full Content Index according to GRI-G4. As with the first report, ELG did not seek an external assessment of this report.

This report comprises ELG’s fiscal year 2015, which starts on January 1, 2015 and ends with the date of December 31, 2015. As mentioned in 2014, we remain committed to publish in alternating years a full report and an update, respectively. A Sustainability Update 2016 will be available in spring 2017, and the next full Sustainability Report will be released in spring 2018.

If you have any further queries or valuable suggestions, you will find the contact details of our Corporate Responsibility Team on the last page of this report.

KEYNOTE BY THE ELG BOARD

Dear Reader,

We deliver: As promised in ELG's first Sustainability Report covering 2013 and following the Sustainability Update published last year, we bring to you below the full report on 2015 giving account of our latest corporate responsibility efforts, successes and challenges.

Challenges to the business were manifold in the past year with unprecedented scrap scarcity and the lowest raw material prices in 15 years. It is times like these which reveal how seriously corporations and also individuals walk their talk about corporate culture and responsibility.

We take pride in the fact that our values do not change in rough waters. You will see how we at ELG again remained true to ourselves as we outline for you our understanding of commitment and stewardship as a corporate citizen in the following four chapters on our core sustainability focus areas:

One of the most efficient contributions our trusted customers can make to preserve nature is to utilize ELG's scrap to the largest portion technically possible. Read more in our "**Operational Focus**" on ELG's carbon footprint across our value chain.

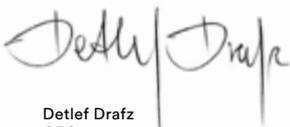
In the report on our "**Compliance Focus**" we outline for you the various measures we have taken in the past two years to make sure integrity continues to be second nature to all of our employees and business partners.

Our employees' wellbeing remains one of our most important topics. Reducing work-related accidents, absences and unwanted fluctuation are the core aims of the ELG Health & Safety PLUS project, which we explain in the chapter "**Employee Focus**" below.

As illustrated in our "**Commercial Focus**" we firmly believe that our sustainable commercial success is rooted in ELG's ability to shape our businesses through lateral thinking and innovative products.

There is no better time to think ahead and be bold than now. Our stakeholders can rely on ELG to seize opportunities and act prudently at any time, just as we have done so often in our long history. In that sense, we are blessed that we can build on the enthusiasm of the people that make up ELG on the one side, and the long-standing trust of our business partners on the other. Together we will not only take on the current challenges of the business but keep changing it for the better.

We invite you to join us on this journey.



Detlef Drafz
CEO
ELG Haniel GmbH



Silke Landwehrmann
CFO
ELG Haniel GmbH

OVERVIEW OF ELG'S FOCUS AREAS

With the processing and the global trade of raw materials – especially in the market segments of stainless steel and superalloys – sustainability is firmly anchored in the business model of ELG. According to ELG's corporate philosophy, beyond the obvious conservation of resources, we place employee empowerment, ethical conduct and strong partnerships with suppliers, customers and other stakeholders at the center of our entrepreneurial activities.

In conjunction with various stakeholders, ELG has developed four core pillars of its CR strategy: Within the fields of action "Operational Focus", "Compliance Focus", "Employee Focus" and "Commercial Focus", ELG recognizes and progresses relevant CR issues and communicates them in CR reports.

Figure 1: ELG's Focus Areas



OPERATIONAL FOCUS – CARBON FOOTPRINT OF ELG'S PRODUCT PORTFOLIO

Environmental Protection, Transparency and Innovation of new techniques are important issues in our Sustainability Materiality Matrix. They were also the driving force for a study which ELG launched in the year 2015. Even though it is apparent that the recycling of materials is ecologically more sensible than the sourcing of primary materials, the exact amount of greenhouse gas savings of materials other than stainless steel was previously unknown to us.

In order to learn more about the carbon footprint of Inconel, titanium and carbon fibers, and to verify the data concerning stainless steel, the study carried out with the help of the environmental experts of Fraunhofer UMSICHT, of Oberhausen, had three main objectives: Firstly, a calculation of specific CO₂ savings for ELG customers with respect to the investigated materials; secondly, a calculation of overall CO₂ savings by ELG's recycling activities; and thirdly, the identification of possible hotspots – are there processes with greenhouse emission savings potential? This Sustainability Report gives us the opportunity to present to a wider public the main outcome of the study.

GREENHOUSE GAS BALANCES 02 / 1 FOR STAINLESS STEEL

Steel has low maintenance costs and a long life, both key indicators that the impact of the material on the planet is at the lowest levels possible. Carbon and stainless steels are easily recycled which makes it possible to produce more steel of the same or higher quality. This process can be carried on infinitely. As steel has a high intrinsic value, it is collected and recycled without any economic incentives from the public purse.

The elements stainless steel comprises, i. a. iron, chrome, nickel and molybdenum, make the steel corrosion resistant. Stainless steel has a wide variety of applications ranging from household cutlery to tanks for the chemical industry. For the study, two common sorts of steel were assessed: AISI 304 steel and AISI 316 steel (corrosion resistant steel). The estimated end-of-life recycling ratio of stainless steels amounts to 80 % to 90 % due to valuable raw materials (e. g. chromium, nickel, and molybdenum) which make recycling economically viable.

The carbon footprint per ton of primary stainless steel slabs is calculated to be 4,464 kg CO₂ equivalent (CO₂-eq) for AISI 304 steel and 5,128 kg CO₂-eq for AISI 316 steel. The greenhouse gas emissions are mainly driven by the demand for ferronickel

(67 % and 73 %, respectively), pig iron (17 % and 12 %, respectively), and ferrochromium (11.5 % and 10 %, respectively).

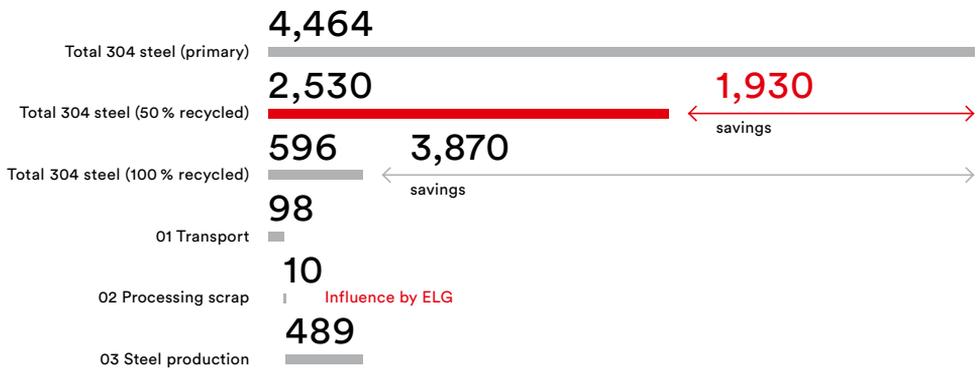
In contrast, the greenhouse gas emissions of recycled AISI 304 steel are calculated to be 596 kg CO₂-eq/ton, those of AISI 316 steel are 623 kg CO₂-eq/ton. A theoretical substitution of 1ton of virgin AISI 304 steel by 1ton of 100 % recycled AISI 304 steel reduces the carbon footprint by 3,867 kg CO₂-eq, the theoretical savings for AISI 316 amount to 4,505 kg CO₂-eq.

Stainless steel with a scrap ratio of 50 % scrap saves 1,930 kg CO₂-eq/ton. Such a recycling share can be found on the market and shows realistic greenhouse gas emission savings of a recycled stainless steel product.

The preparation of scrap by ELG – i. e. checking it for quality (chemistry/impurities) and radioactivity, cutting, burning, blending and packaging – contributes to only 2 % of the greenhouse gas emissions in the whole process. This means that our influence on reducing the absolute CO₂ footprint of a ton of stainless steel manufactured from our material is rather small. Even on the 2 % we can strive,

Figure 2: Greenhouse gas emissions (GHG) of primary and recycled stainless steel AISI 304 (1.4301) with 50 % scrap and 100 % scrap

kg CO₂-eq/ton stainless steel (304)



however, to keep greenhouse gas emissions as low as possible, e.g. by using eco-modes on cranes and by optimizing material streams. Compared to a ton produced (hypothetically) with primary raw materials only, the use of ELG's material is clearly an enormous benefit to the environment. The more the better!

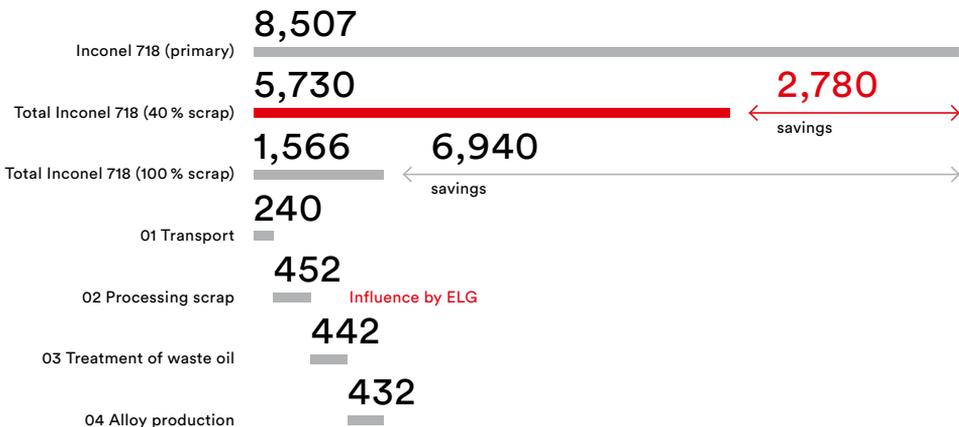
rockets, rings, casings and various formed sheet metal parts for aircrafts, applications for sour gas and oil wells, land-based gas turbine engines, and cryogenic tankage. It is also used for fasteners and instrumentation parts.

Titanium Ti 6-4 (Grade 5) is the most widely used high-strength titanium alloy. It combines good mechanical strength and low density with excellent corrosion resistance. Among typical applications for Titanium Ti 6-4 (Grade 5) are aero-engine components, airframe components, marine equipment, offshore oil and gas equipment, power gen-

02 / 2 GREENHOUSE GAS BALANCES FOR INCONEL AND TITANIUM 6-4

Inconel 718 is a high-strength, corrosion-resistant nickel-chromium alloy. Among other applications it is used for liquid fueled

Figure 3: GHG emissions of primary and recycled Inconel 718 with 40 % scrap and 100 % scrap
kg CO₂-eq/ton Inconel 718



eration hardware, automotive components, and medical equipment.

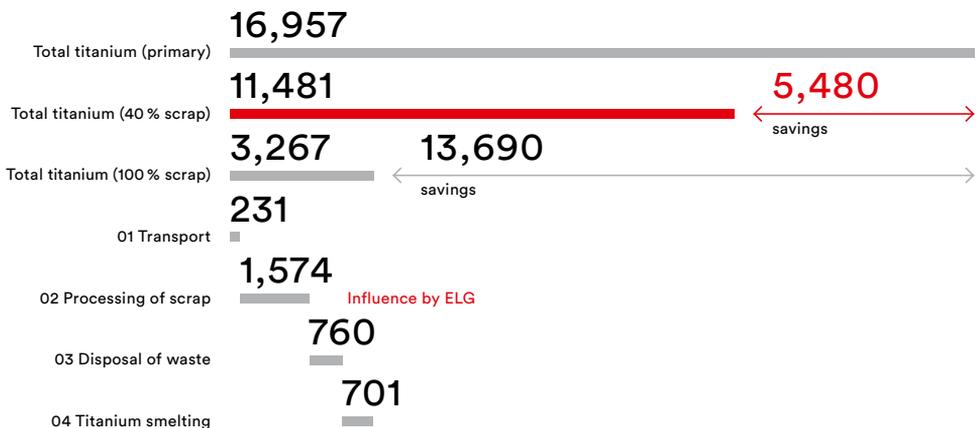
The carbon footprint of 1 ton of primary Inconel 718 is calculated to be 8,507 kg CO₂-eq. Greenhouse gas emissions are mainly driven by the demand for primary nickel (62 %) and ferrochromium (27 %). In contrast, the carbon footprint of recycled Inconel 718 is calculated to be 1,566 kg CO₂-eq/ton. Total greenhouse gas emissions savings per ton of Inconel 718 through recycling amount to 6,940 kg CO₂-eq/ton.

Looking at the breakdown for the value chain of this recycled Inconel 718,

the processing of scrap by ELG contributes 29 % to the total greenhouse gas emissions. Considering the greenhouse gas emissions caused by the disposal of waste oil (28 %) a total of 57 % can be attributed to ELG activities. In particular the thermal energy needed for washing and drying Inconel chips contributes to the total emissions.

Inconel 718 with a scrap ratio of 40 % scrap saves 2,780 kg CO₂-eq/ton. Such a recycling share can be found on the market and shows realistic greenhouse gas emission savings of a recycled Inconel 718 product.

Figure 4: GHG emissions of primary and recycled Titanium 6-4 with 40% scrap and 100% scrap
kg CO₂-eq/ton titanium grade 5



02 / 3 TITANIUM 6-4 (GRADE 5)

With 16,957 kg CO₂-eq, the carbon footprint of 1 ton of primary Titanium 6-4 (Grade 5) is the highest of the metals evaluated. This is mainly due to the production of pure titanium itself. This fact is compensated partly, however, as the use of Titanium as a high-performance material in the aerospace and automotive industry serves to save considerable quantities of CO₂ in the material's ultimate applications. This positive effect can even be amplified through the use of recycled Titanium: The carbon footprint of recycled Titanium 6-4 is calculated to be 3,267 kg CO₂-eq/ton. The total greenhouse gas emissions savings per ton of Titanium 6-4 through recycling are 13,690 kg CO₂-eq/ton, which means, again, that the more of ELG's recycled material is used to produce the global Titanium 6-4 demand, the larger the greenhouse gas savings.

Nonetheless, and focusing again on this recycled Titanium 6-4, approximately 48 % of the greenhouse gas emissions are caused by the processing of titanium chips by ELG. In addition, a further 23 % of the total emissions are caused by the disposal of waste oil, and only 21 % of greenhouse gas emissions can be traced back to the smelting of the prepared titanium chips. This means ELG's activities influence the global

warming potential (GWP) of recycled Titanium 6-4 to a great extent.

With a standard scrap ratio of 40 %, there are realistic greenhouse gas emission savings of 5,480 kg CO₂-eq/ton.

A closer look at the greenhouse gas emissions caused by the energy demand for the preparation of titanium chips shows that approximately half of the emissions are caused by thermal energy demand and the other half by electricity demand. Recognizing this, we are currently analyzing further if technical measures can lower the demand for thermal energy or electricity in the future.

GREENHOUSE GAS BALANCES 02 / 4 FOR CARBON FIBERS

Carbon fibers are made from carbon atoms with a parallel alignment, thus giving them a very high strength-to-volume ratio. They are combined with other materials to form composites, for example with a plastic resin to form carbon-fiber-reinforced polymer. Composites are used in aerospace, automotive and civil engineering, sports goods and other consumer and technical applications in order to replace e.g. aluminum. In contrast to metals, carbon fibers cannot yet be recycled without a decrease in quality. Nevertheless, reclaimed or recycled carbon

fibers are an excellent resource for a lot of applications.

The carbon footprint of 1 ton of polyacrylonitrile-based (PAN) carbon fibers is calculated to be 31,000 kg CO₂-eq. Considering that 1 ton of recycled milled fibers replaces only 95 % of PAN-based carbon fibers the greenhouse gas emissions are adjusted to 29,450 kg CO₂-eq. The recycling process for 1 ton of milled fibers causes greenhouse gas emissions of 4,653 kg CO₂-eq.

Greenhouse gas savings are approximately 24.8 kg CO₂-eq/ton for milled carbon fibers.

Of the CO₂ emitted to produce recycled carbon fibre, 99 % can be assigned to the recycling process as practiced in our carbon fiber

recycling plant in Coseley, United Kingdom.

Therefore, the inevitable exhaust gas treatment is responsible for approximately 60 % of the total greenhouse gas emissions, followed by electricity needed for heating the furnace (33 %) and emissions caused by the incineration of impurities (6 %).

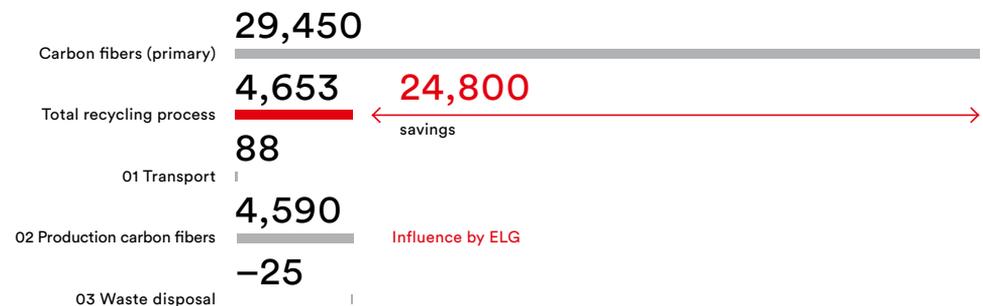
OVERALL AND SPECIFIC SAVINGS

02 / 5

The overall greenhouse gas emissions savings for ELG referring to the material flows covered by the study cited are calculated by multiplying the amount of recycled products produced from scrap in one year with the specific greenhouse gas emissions savings of the investigated materials.

Figure 5: GHG emissions of primary and recycled carbon fibers

kg CO₂-eq/ton carbon fibers



The total calculated greenhouse gas emission savings realized by ELG in 2014 were 5,059,021 tons of CO₂-eq. Stainless steel being the main driver due to the high recycling volumes.

02 / 6 LESSONS LEARNT

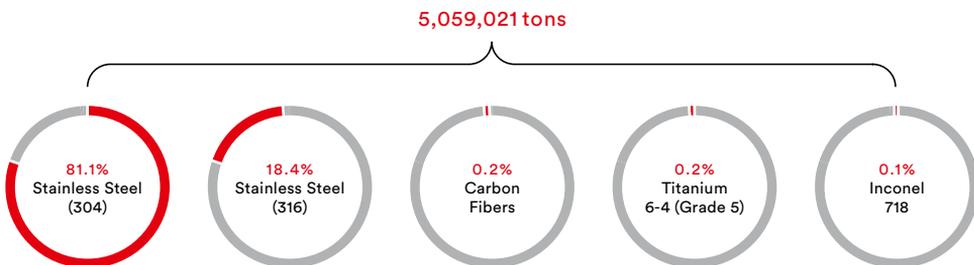
ELG is an important and integral part of the recycling value chain. With the outcome of the study we are able to quantify the amount of saved greenhouse gas emissions for our main product groups. Considering that stainless steel contributes the most to our overall business, and that our influence on the CO₂ footprint of a ton of recycled stainless steel is relatively small, it is not likely that ELG will be able to reduce the stainless steel-related impact significantly. The major lever to raise the total greenhouse gas emissions savings

regarding stainless steel is for our valued customers to increase the scrap ratio and for ELG to increase our recycling volumes.

What we do next is to further assess our processes in respect to the savings potentials of greenhouse gas emissions where we do have influence. All our subsidiaries were provided with detailed information and a questionnaire following the study in order to identify those potentials.

High material-specific greenhouse gas emissions savings may be achieved by the recycling of carbon fibers, followed by titanium and Inconel 718. These are promising markets for ELG. With our recycling operations across the globe we are in the vanguard on these high-performance materials, and we are eager to use their greenhouse gas savings potentials to the full.

Figure 6: Distribution of GHG savings per material



Distribution of saved GHG emissions for the investigated materials in 2014 (ELG Haniel 2014)

02/7 RADIOACTIVITY ALARMS

With our so-called Triple Validation Scheme (see ELG’s Sustainability Report 2013 for a detailed description), ELG is an industry forerunner in detecting and filtering out any incoming material that deviates from the natural background radiation. Such deviation by itself is for the most part unharmed and explainable by the naturally occurring radioactive material (“NORM”). Nonetheless, our customers and downstream users trust us to safeguard a radiation-free raw material stream to the largest extent possible. With the help of our cutting-edge equipment and highly skilled personnel at our 50 operations across the globe, we have been able to reduce the number of alarms that would otherwise be triggered at our customers’ sites drastically. Compared to 2014, ELG’s radioactivity alarms at customers’ facilities have increased from

7 to 13. This means that 13 alarms were detected on a total tonnage of 1.43 million metric tons. This implies an increase from 0.004 to 0.009 triggered alarms per thousand tons (see chart below). Between 2012 and 2014 we had an average of ten alarms per year. While, ideally, we would like to see “zero” alarms at our customers’, we need to emphasize again that slight and harmless deviations from the ever-present natural background radiation, which are part of the explanation for alarms in general, can never be avoided.

The increase can be explained by the fact that improved measuring equipment tends to show radiation more sensitively and more precisely.

In this regard we work tirelessly to improve our detection range and see ourselves as a corrective and a constant in the “fight” for scrap purity.

Figure 7: Alarms

YEAR	TOTAL TONNAGE	ALARMS	ALARMS PER TON
2014	1.61 million metric tons	7	0.000004
2015	1.43 million metric tons	13	0.000009

COMPLIANCE FOCUS – INTEGRITY AT YOUR FINGERTIPS

ELG’s Compliance Management System (“ECMS”) has been tailored to the fast-paced and global nature of the business we do and the diverse group of people that form the ELG family. The roots and evolution have already been described in the Sustainability Report 2013 and the Update 2014, which are available upon request.

The scope of the ECMS is designed to safeguard a constant awareness and a uniform understanding of compliance at ELG and to control compliance risks to the largest extent possible in order to ensure that internal and external rules are being adhered to by all ELG employees, officers and

representatives at all times, see Figure 8.

Based on the “Tone from the Top Trainings” in September 2014, the ECMS has been enhanced further in 2015.

6 PRINCIPLES

03 / 1

“TATTOO CAMPAIGN”

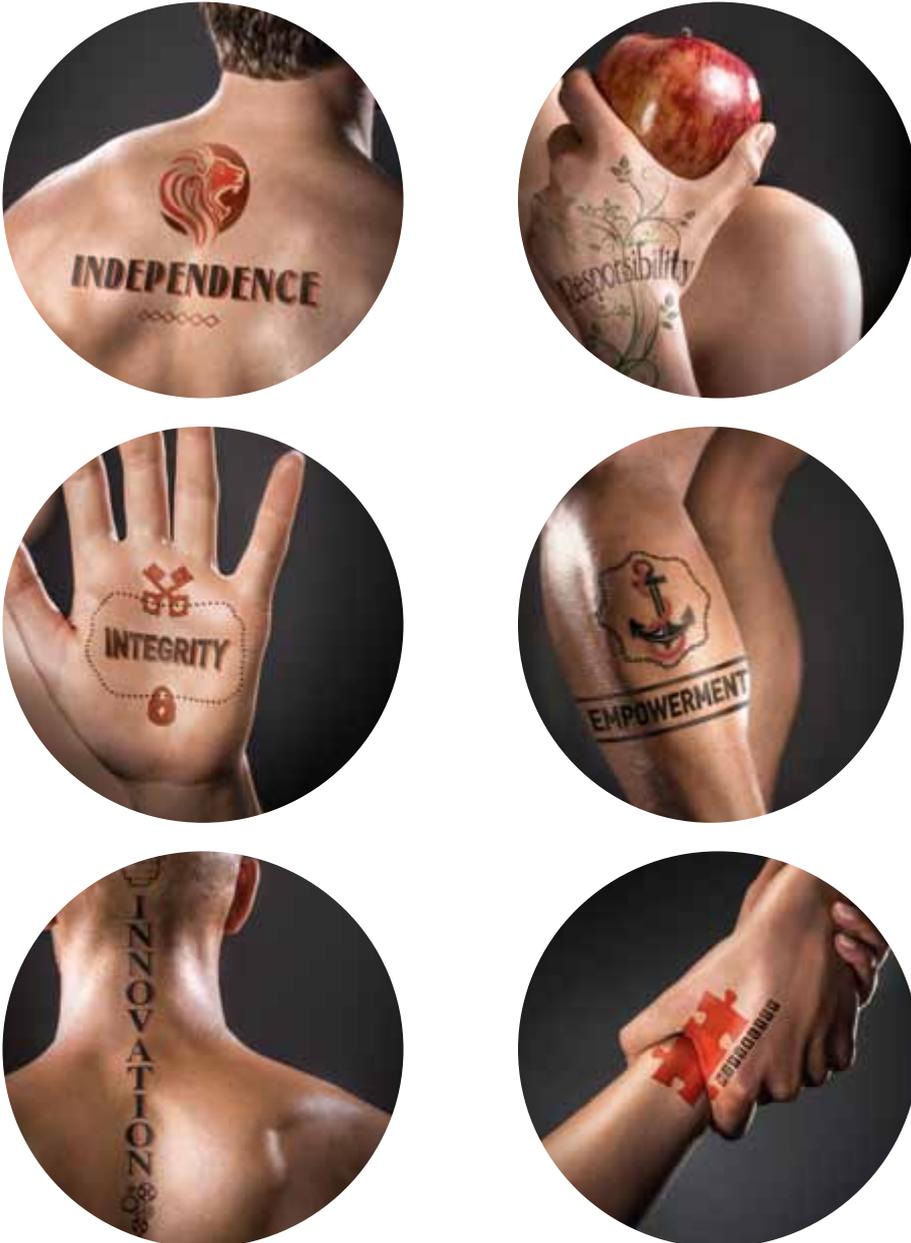
Empowerment, Innovation, Integrity, Independence, Responsibility and Mutuality – these are the principles that make up ELG’s desired corporate culture and serve as our code of conduct.

In an effort to enhance awareness further and bring the principles to every employee within the ELG Group, ELG has rolled out a worldwide company communication campaign. This campaign has become one of the core instruments to promote the ECMS as it is far-reaching and – as can be seen below – designed to go under the skin, yet concise and self-evident at the same time.

Figure 8: ELG Compliance Management System (“ECMS”)



Figure 9: 6 Principles of ELG



Presented by ELG's CEO, Detlef Drafz, and translated into all major languages spoken in the Group, the strong images were first distributed electronically to all employees with e-mail access. To reach all colleagues on the shop floor, too, posters and flyers of the tattoo campaign were distributed in eight different languages to all of ELG's 50 worldwide operations. Hung up in warehouses, office spaces and waiting areas, the pictures also further strengthen the public perception of the "6 Principles of ELG".

Contact details of the Group Compliance Officer ("GCO") and the ELG Compliance Helpline are printed on flyers as well as on the posters. ELG ensures that at any time employees will receive support if they need it.

E-LEARNING (EMPLOYEE COMPLIANCE TRAINING)

03 / 2

In collaboration with HANIEL, we decided to bring compliance even closer to our employees worldwide using yet another communication channel. In 2015, ELG has rolled out an online training on compliance-related issues worldwide. In October 2015, the first module "Prevention of Corruption" was brought to all 50 locations and to all employees with e-mail access. Almost 600 employees were successfully trained. The aim of the training is to sensitize all ELG employees throughout the world, to create awareness and avoid mistakes to the largest extent possible.

The Compliance E-Learning will be continued with three further topics to be brought to relevant employees until 2017.

03 / 3 **RULES OF PROCEDURE AND GOVERNANCE GUIDELINE**

The ECMS' backbone has always been a well-balanced system of standing orders which govern the relationship of an ELG company's executive personnel (Directors & Officers) on the one hand and their supervisory body on the other.

The revision and amendment of this system was initiated in 2013 and could be fully implemented in 2015 with the rollout to all 48 ELG companies worldwide.

Changes include the reflection of new governance requirements of ELG's ultimate parent company HANIEL, the inclusion of the 6 Principles of ELG as a binding and guiding code of conduct, a consistent system of approval thresholds and the addition of two new guidelines including the ELG Governance Guideline ("ELG GG"). The latter covers the areas of Risk Management, Compliance, Internal Control System and Internal Audit, and describes the mandatory measures and thresholds for the ELG companies.

The Compliance section of the ELG GG introduces newly defined compliance responsibilities in each and every ELG legal entity, regardless of its size or turnover, as well as a formalized Compliance Committee at ELG Haniel GmbH that is to regularly assess the adequacy of the ECMS and the impact which individual local compliance cases may have on other parts of the ELG Group.

LOCAL COMPLIANCE TRAININGS

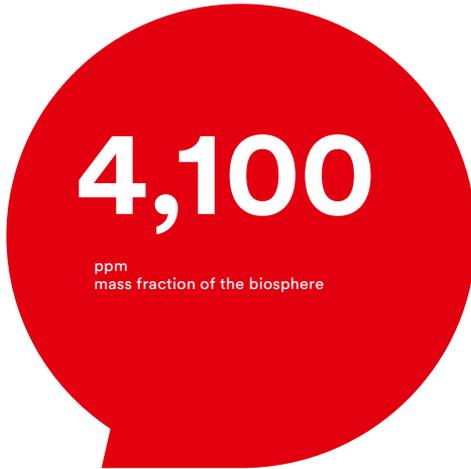
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Local Compliance Trainings have been conducted in the ELG companies in the following countries: Germany, the Netherlands, the Czech Republic, Switzerland, the USA and Canada. The trainings are scheduled according to a centralized risk-based assessment and follow a well-proven agenda: Invitation and sponsoring is taken over by the local Board of Directors, opening words are usually spoken by the CEO.

The training's content is designed to the local legal requirements by a team of external compliance experts. The scope and functioning of the ECMS and the tone set by the ELG Board is conveyed by the GCO, who is personally present. ELG's local Compliance Trainings not only promote knowledge on the topic at hand but also serve as an ideal forum to voice concerns and discuss possible improvements.

03 /5 COMPLIANCE AUDIT

Already in 2014, ELG's parent company HANIEL decided to implement a directive on minimum standards for compliance applicable to the Haniel Group companies. The implementation of their directive was subject of a focus audit that took place in 2015. The multi-faceted ECMS was found not only to be adequate but somewhat exemplary for the size and nature of ELG's business. This outcome confirms our perception of the effectiveness of the ECMS and is a call for everyone involved to keep up the good work.



	Nb 41 19 ppm	C 6 870 ppm	Cu 29 100 ppm						
Co 27 37 ppm		Fe 26 47,000 ppm	Mo 42 14 ppm	W 74 64 ppm	Ni 28 150 ppm				
Ni 28 150 ppm	Ti 22 4,100 ppm		Nb 41 19 ppm	C 6 870 ppm	Cu 29 100 ppm	V 23 410 ppm	Co 27 37 ppm		
	V 23 410 ppm		Ta 73 8 ppm	Fe 26 47,000 ppm	Mo 42 14 ppm	W 74 64 ppm	Ni 28 150 ppm		
		Ni 28 150 ppm	Ti 22 4,100 ppm	Cr 24 190 ppm	Nb 41 19 ppm	C 6 870 ppm	Cu 29 100 ppm		

EMPLOYEE FOCUS – HEALTH & SAFETY PLUS PROJECT

As previously reported, Occupational Health & Safety and being a Responsible Employer rank very highly in ELG's Sustainability Materiality Matrix both for ELG and our stakeholders. In an effort to make transparent our tools and initiatives in this area, we introduced a global HR reporting system in 2013 using a uniform standard to allow for comparability. This reporting was launched in order to minimize future accidents and absences and using the power of data to identify potential causes. ELG kept working on its aim to reduce work-related accidents, because we are still aiming for "Zero" as our final goal.

To measure and ultimately improve the health and safety of our employees further, ELG's "Health & Safety PLUS" project was launched as of January 2015. ELG plans to capture accidents, absences and fluctuation in all 50 ELG locations in order to strengthen awareness through transparent communication and reward local efforts to develop and share recommendations for improvement.

ELG's main focus in 2015 was the assessment and verification of the collected data. We are pleased, however, to announce that we had no fatalities and that the number of serious accidents at work at any of ELG's locations worldwide continues to be at a low level. Common injuries at ELG operations include cuts and bruises in connection with

the physical handling of scrap. ELG is also content that the number of absence days per FTE is 6.8 on average throughout the entire ELG Group. Based on these preliminary numbers ELG would like to reduce the number of accidents at work by an average of currently 18 to 15 per one million working hours and keep the number of absence days below 7.5 per FTE by the end of 2017.

Kindly note that we are moving towards a different KPI on injuries (serious injuries per 100 FTE → accidents per one million working hours). The reason for the change of the measured variable is the increased comparability.

What the Health & Safety PLUS project also brought with it was transparency on the superb work done in our local operations to improve employee well-being. Some of these efforts are the following:

- Insurance healthcare program for all US locations resulting in the reduction of the number of absence days
- Preventive medical checkup → flu vaccinations for all employees at Duisburg
- Internal education offers via ELG's Intranet: training videos and Excel trainings for Microsoft Office, PowerPoint, etc.
- Cooperation with the Employer's Liability Insurance Association: Handout with instructions for drivers of company vehicles → These instructions include the main

rules and international traffic rules (e. g. taking medications, drugs, premeditation, insurance coverage)

- Monthly reporting of HR key performance indicators by the Head of HR to the ELG Board
- Introduction of a mandatory agenda item on Management Meetings between the leaders of all major ELG business units and the ELG Board twice per year

ELG will take these measures forward and will as part of the H&S PLUS project identify and implement other suitable instruments to promote the goal of keeping the numbers of injuries, absences and fluctuation on a continuously low level.

2016 will be important to optimize reporting further and derive more measures to reduce – if possible – the numbers to zero. In 2017, it will be shown which measures have been implemented and to what degree of success.

Furthermore, the companies within ELG abide by relevant trade union agreements, as and when applicable. Temporary workers are utilized on an occasional basis by some operations within ELG in line with all pertinent regulations. If and when it is felt that individual temporary workers would contribute more to ELG's success if they were employed directly, we regularly exploit the opportunity to do this. There are no relevant seasonal implications for the composition of ELG's workforce.

TOTAL HEADCOUNT 2015 / 2014*

1,247 / 1,280

REGULAR EMPLOYEES 2015 / 2014

1,133 / 1,160

EXECUTIVE STAFF 2015 / 2014

114 / 120

EUROPE 2015 / 2014

744 / 782

AMERICAS 2015 / 2014

427 / 429

AUSTRALIA & ASIA 2015 / 2014

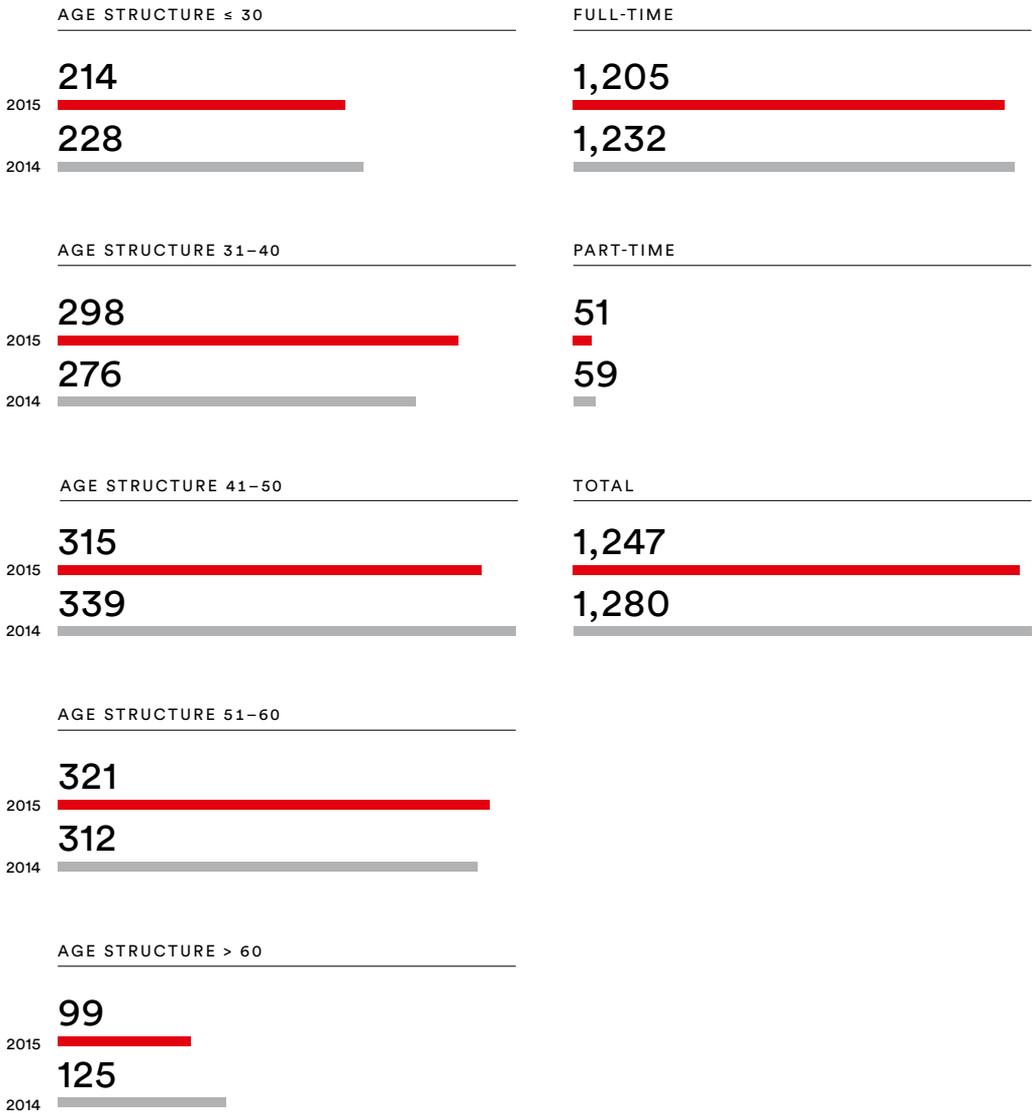
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AFRICA 2015 / 2014

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* See Figure 10: Staff statistics 2015

Figure 10: Staff statistics 2015

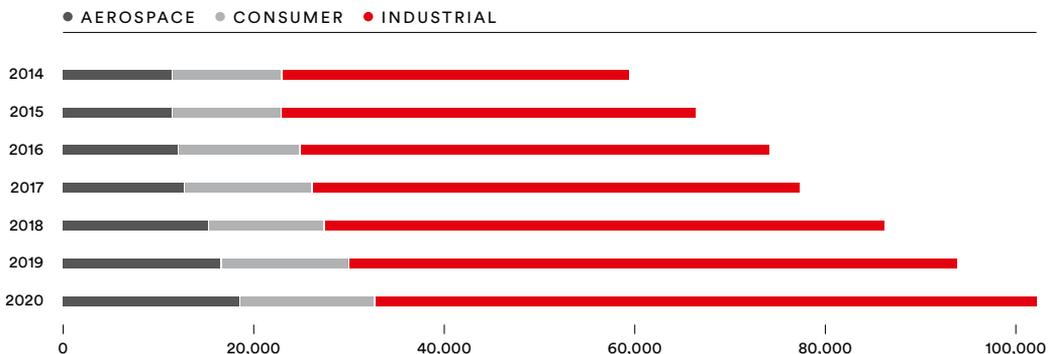


COMMERCIAL FOCUS – CARBON FIBER RECYCLING

Carbon composites are promising and innovative materials. Compared to other technologies lightweight composite structures are said to have a growth potential of 10 % annually across all industries. Carbon fiber-reinforced polymers (CFRP) have become important materials for lightweight construction in aerospace, wind energy, sports and leisure. Due to their superior characteristics CFRP advance into other sectors as well. There are great potentials in the automotive, engineering, and building industries. Savings in resources and costs are the main drivers for an increase in innovative lightweight construction.

Growing numbers of CFRP products will inevitably lead to growing numbers of carbon waste. Many EU countries prohibit landfill with carbon fiber waste, and more and more waste incinerating plants no longer accept carbon fibers due to the fact that they can only be burnt at 2,000 °C or higher. While carbon waste disposal constitutes a problem to the growing industry. Carbon fiber recycling becomes increasingly interesting, in particular due to ever increasing environmental standards. With its “End of Life Vehicle Directive” the European Union regulates by law that all cars being produced in 2015 or later must, at the end of their life cycle, be recycled to a degree of at least 95 %.

Figure 11: Global carbon fiber production by market segment 2012 – 2020



Source: Composites Forecasts & Consulting LLC

ELG participates in the growing market of carbon fiber recycling with a subsidiary in the UK. ELG Carbon Fibre Ltd (“ELG CF”) was formed when ELG acquired Recycled Carbon Fibre in 2011. Since then, the company has created the world’s first and largest carbon fiber recovery plant at their facility in the West Midlands. ELG CF manages the entire recycling process starting with feedstock classification and preparation through to carbon fiber reclamation and finally carbon fiber conversion into a range of specialist products for use in the transport, electronic, coating and oil and gas sectors.

These innovative products are then re-introduced into the supply chain to support the use of cost-effective recycled carbon fiber products in the manufacture of structures. Whilst ELG continues to optimize the carbon fiber recovery process, the primary focus and challenge of the company is to industrialize the conversion technologies to manufacture recycled carbon fiber products.

The majority of waste originates from the aerospace and automotive sectors. ELG CF accepts dry, prepreg and laminate waste, and full traceability is maintained throughout the process. The incoming feedstock materials are primarily manufacturing waste due to the young age of the carbon fiber industry’s evolution. Thus end-of-life scrap is limited today but is expected to grow in the next five to ten years. Waste is generated at every stage of the supply chain: fiber manufacturing, conversion to intermediate products (weaving, prepregging), and manufacture of finished parts. Total waste will be around 22,000 tons in 2015, rising to 32,000 tons in 2020.

ELG CF operates under a UK Environment Agency Permit that allows the company to process all types of carbon fiber containing waste and to convert the recovered fiber into new products. ELG CF uses a patented furnace process called “continuous pyrolysis” to convert the reclaimed fibers. This involves the thermal removal of resins in an inert atmosphere at temperatures in the range of 400–650 °C.

This equipment is continuously monitored to ensure compliance with permit requirements. The UK Environment Agency completes annual inspections and the Compliance Assessment Report in 2015 concluded all emissions from ELG CF's UK facility were well within permitted limits. In an effort to reduce utility costs and emissions even further, ELG CF is currently investigating suitable ways to enhance the overall efficiency of the off-gas treatment.

It is crucial that the industry moves towards a circular life cycle loop for carbon fiber production and usage. By reusing carbon fiber waste, ELG CF is addressing a supply chain constraint that compromises many manufacturers seeking lightweighting strategies. It also delivers significant cost and environmental benefits.

ELG CF views high-volume transportation applications as the key emerging market that could best benefit from the company's products and services. If the vehicles of the future are manufactured from increased quantities of recycled carbon fibers, these lightweight structures will be more cost-effective, which will then successfully reduce CO₂ emissions, increase compliance with fuel economy regulations and also support the EU End-of-Life Vehicles (ELV) Directive.

ELG CF is part of a collaborative program with Formula One designers Gordon Murray Design to develop panels for the iStream Carbon vehicle. The iStream[®] Carbon process is derived directly from Gordon Murray Design's iStream[®] Manufacturing System.

Figure 12: Furnace input and output figures (in metric tons)

YEAR	WASTE PROCESSED	RECYCLED CARBON FIBERS
2013	n. a.	293
2014	586	496
2015	1,000	998

It is the world's first affordable high-volume carbon fiber chassis structure bringing Formula One materials and technology within reach of the everyday motorist. Furthermore, ELG CF participates in a collaborative program with Warwick University to scale-up the pellet manufacturing process to an industrial scale and to optimize the product for the compounding market. Both these research projects are UK funded.

As manufacturers continue to demand the most advanced material innovations to promote lightweight structures, ELG CF has responded with the development of a unique range of isotropic recycled carbon fiber products.

Carbiso™ products deliver a cost-effective solution to traditional composites in high-volume applications:

Carbiso™ Milled CF – Milled fibers are the highest-volume market for ELG CF. Ideally suited to thermoset and thermoplastic compounding, Carbiso™ Milled products are used extensively in subsea buoyancy applications for oil and gas exploration. The fibers are very conductive and provide anistatic properties in polymer compounds and coatings. They can also be used to make filaments with improved mechanical properties for 3D printing processes.

Carbiso™ Chopped CF – Available in standard lengths of 6–12 mm, this product is suitable for thermoplastic compounding to provide improved strength and stiffness. Chopped fibers are currently being used in several research projects to investigate net shape manufacturing processes, preforming for resin transfer moulding and stamp forming applications.

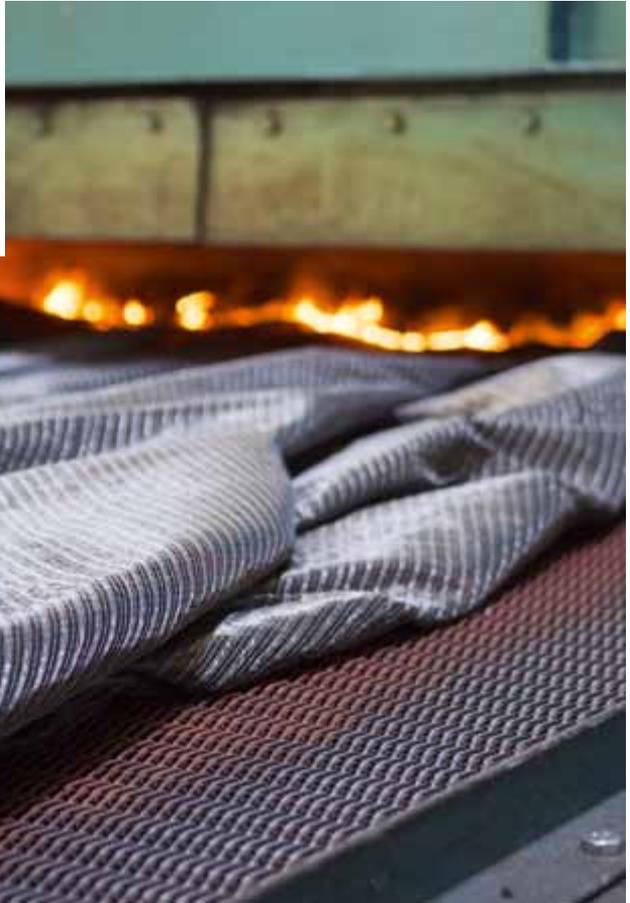
Carbiso™ Nonwoven Mats – Highly drapeable fabrics that are suitable for the production of complex shapes and components. The reinforcements materials are available either as 100 % carbon fiber mats (Carbiso™ M) or hybrids blended with thermoplastic fibers (Carbiso™ TM). After extensive R&D work over the last few years, the nonwoven mat is being launched at JEC World 2016 and will be available in production volumes in Q3 2016.

998

mt
recycled carbon fiber in Coseley (2015)



Operator wearing **standard protective equipment** while working on the pyrolysis furnace



Material bound for the **pyrolysis furnace**

Sampled **superalloy** solid scrap



Duly mutilated **turbine engine blades**



Metal bands being cut to size for further processing with a motorflex saw



Optical emission spectrum analyzer being applied to identify the full range of ingredient elements and traces thereof



Sample cylinders representative of different scrap lots



Carbiso™ C chopped carbon fiber, used to reinforce thermoplastic compounds

CF scrap in the form of **woven mats**
immediately prior to processing



Automotive components are increasingly manufactured
using high-performance materials such as carbon fiber



Employee at ELG Carbon Fibre Ltd's Coseley operation holding different samples of Carbiso™ M nonwoven mats for inspection

14

ppm
mass fraction of the biosphere

				V 23 410 ppm		Ta 73 8 ppm	
		Fe 26 47,000 ppm	Mo 42 14 ppm	W 74 64 ppm	Ni 28 150 ppm	Ti 22 4,100 ppm	
Ni 28 150 ppm		Cr 24 190 ppm	Nb 41 19 ppm	C 6 870 ppm	Cu 29 100 ppm		
Cu 29 100 ppm	V 23 410 ppm		Ta 73 8 ppm	Fe 26 47,000 ppm	Mo 42 14 ppm	W 74 64 ppm	
Mo 42 14 ppm	W 74 64 ppm	Ni 28 150 ppm	Ti 22 4,100 ppm	Cr 24 190 ppm	Nb 41 19 ppm	C 6 870 ppm	Cu 29 100 ppm

CORPORATE STRUCTURE

06 / 1 THE DIVISION OF ELG AND OUR ACTIVITIES

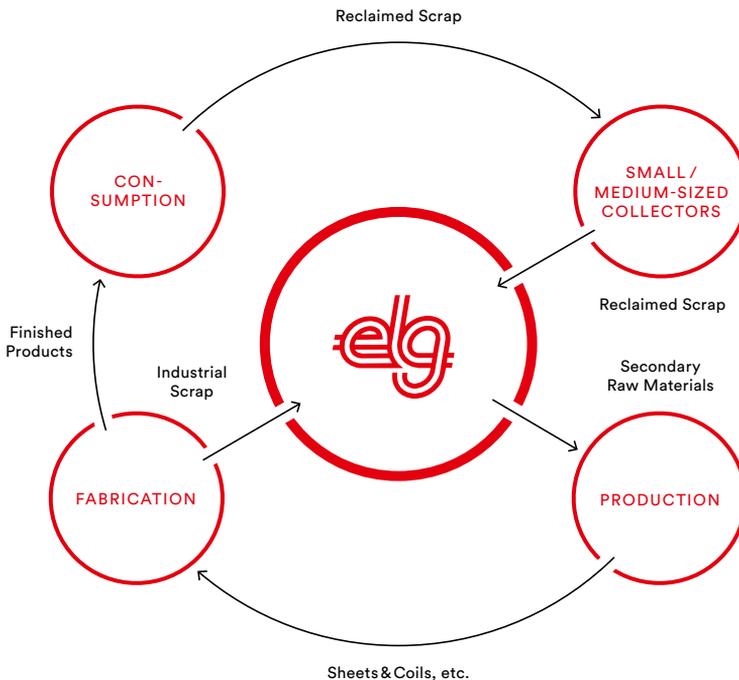
Even though we have reported in our first report in great detail about our business activities, we would like to inform you once again about the important facts, products and services by ELG.

We, as ELG, are well known as one of the global, market-leading groups of companies in the business of trading and processing primary and secondary raw materials.

This includes especially the stainless steel market segment. The raw materials we deal with are mainly the result of urban mining, i. e. various qualities of man-made scrap metal, which can be used and reused endlessly.

Figure 13 below shall serve to give you an overview of the part of the metal life cycle that we help shaping. For the purpose of recycling these secondary raw materials as conducted by ELG, both industrial arisings and reclaimed materials are collected at ELG

Figure 13: The metal life cycle



yards worldwide, processed to customers' specifications, and provided to steel mills worldwide, thereby being brought back into the recycling cycle (see Figure 14). ELG works with thousands of trusted suppliers in order to source small and medium-sized lots of material of manifold compositions and qualities.

Our suppliers in turn collect these and often also other materials from their downstream trade partners, and so on. It is a characteristic of the metal scrap trade that supplier relationships are built on mutual trust.

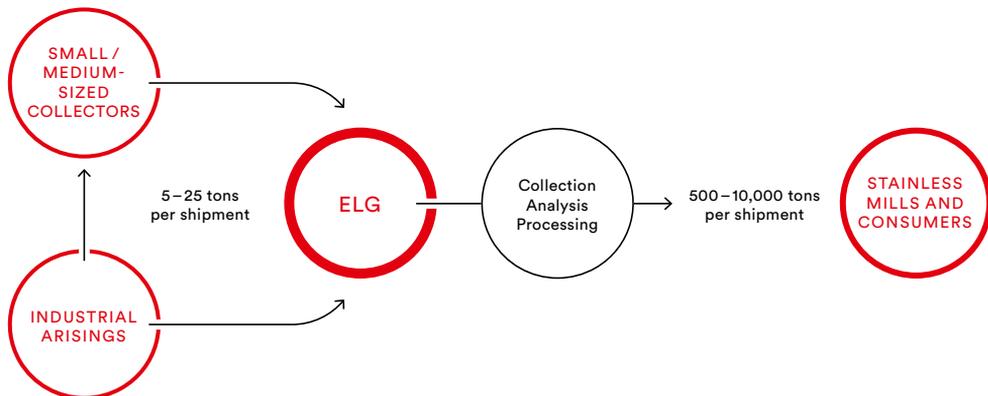
At the same time, however, all traders of this raw material diligently keep their

respective sources secret, as access to the source of arising constitutes a potential competitive advantage.

While this implies that it is impossible to oversee the full cycle of the material stream, it is our employees' years and years of experience paired with modern investigative tools that best secure the adherence of our suppliers to ELG's high standard of values.

It is this relationship between ELG's supplier base and our traders that safeguards the high volume of material that flows into ELG's yards across the globe.

Figure 14: The processing chain in metal recycling

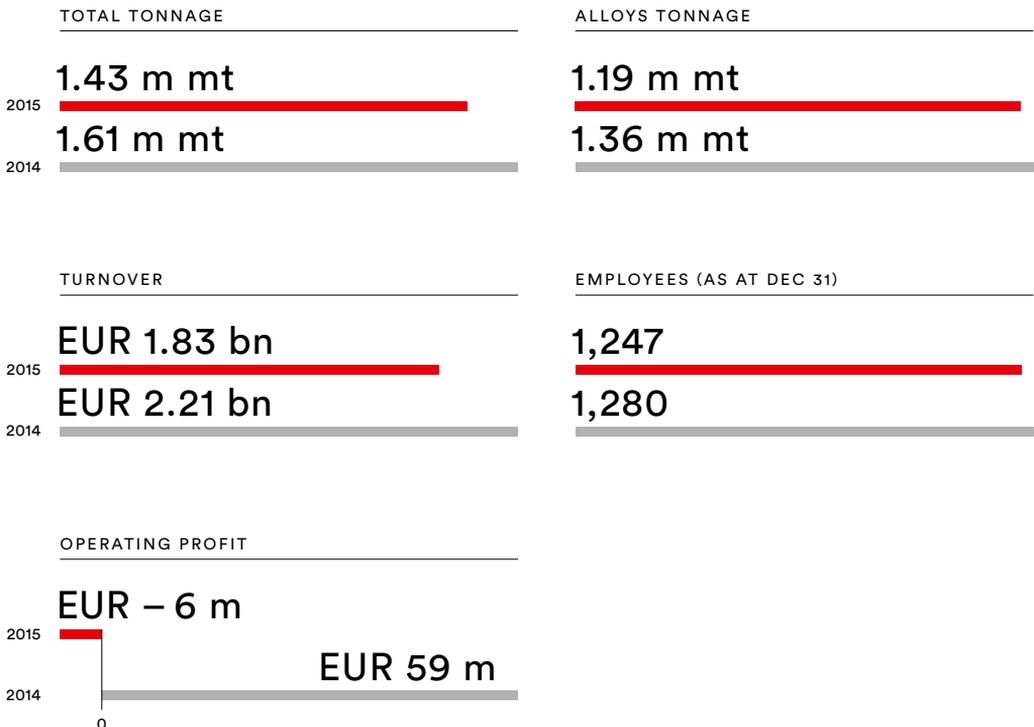


Thereafter, to put it simply, the value creation of ELG consists of transforming the heterogeneous collection of materials into a tailor-made, homogeneous, and constant stream of valuable raw material to be used by its global customers (see Figure 15, tonnages pertain to stainless steel scrap).

We at ELG contribute to reducing the stream of metal waste, turn it back into raw material and enable our customers to transform it into new products. Together, we serve to close the loop for what was formerly a limited resource.

Figure 15: Key figures for ELG

mt = metric tons bn = billion m = million



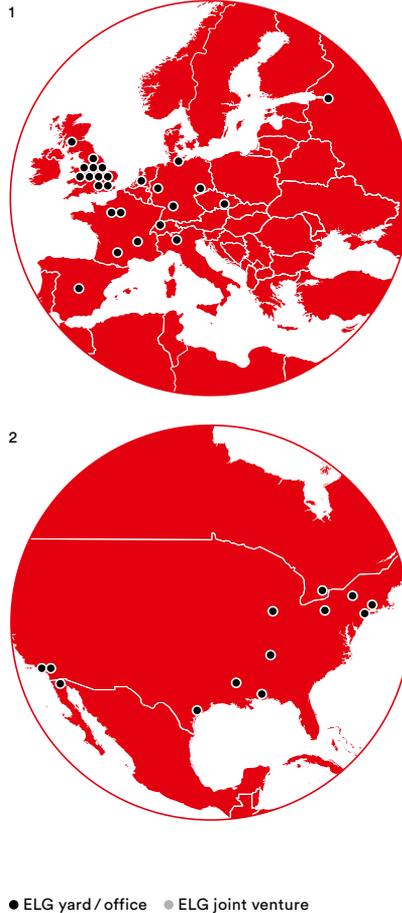
06 / 2 ELG OPERATIONS AND WHERE WE DO BUSINESS

Economically, 2015 was a challenging year for the recycling and raw materials sector.

Also ELG was impacted by China, which accounts for approximately half of the global stainless steel production, as well as a further substantial decline in the price for the main metals traded by ELG (nickel, chrome, iron, molybdenum). While the value of most base metals relevant to our ELG Utica Alloys division also decreased considerably in 2015, the demand for our products and services in particular from the aerospace industry was mainly robust (see HANIEL’s Annual Report 2015 for more details on ELG’s business situation).

In this difficult market environment ELG has further expanded and optimized its network of locations in the past two years and opened additional operations. Thus, ELG is now represented in 21 countries and operates 50 scrapyards worldwide (see Figure 16).

Figure 16: ELG operations



1 EUROPE Duisburg, Karlsruhe, Dresden, Kiel, Rotterdam, Irvine, Sheffield, Blaydon, Hyde, Darlaston, Gloucester, Barking, Rowley Regis (CSR), Sheffield, Mexborough, Manvers / Rotherham, Coseley, Limay, Lyon, Toulouse, Cergy-Pontoise, Rogeno, Muttentz, Madrid, Brno, St. Petersburg
2 AMERICA McKeesport, Houston, Mobile, Los Angeles, Chicago, Louisville, New York, Herkimer, South Gate, Hartford, Monroe, Burlington, Mexico
3 & 4 ASIA Shanghai, Xi’an City, Korea, Singapore, Mumbai, Oyama City, Osaka, Kita-Kyushu, Tokyo, Yokohama, Kaohsiung
5 AUSTRALIA Melbourne, Sydney
6 AFRICA Johannesburg

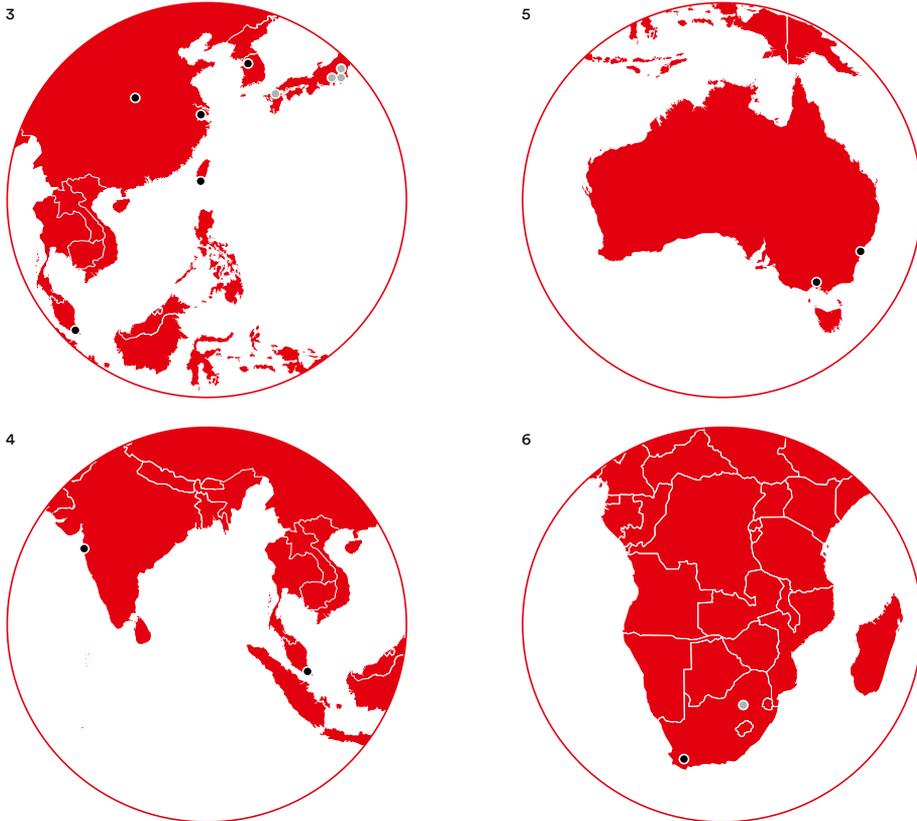
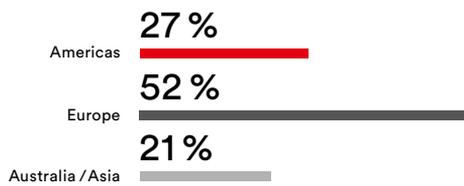
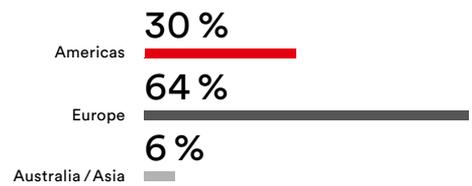


Figure 17: International sourcing and sales 2015

SALES



SOURCING



06 / 3 OWNERSHIP STRUCTURES (CORPORATE EVOLUTION OF ELG)

ELG was founded in Germany in 1962 and was acquired by HANIEL in two steps in 1983 and 1989. For 260 years, HANIEL has been a 100 % family owned company.

HANIEL aims to constantly expand and develop its portfolio by maintaining and supporting durable and sustainable investments. In 2015, the parent company has broadened its portfolio with the addition of BEKAERT, who is the world's leading specialist in the development and manufacture of woven and knitted fabrics for mattress covers. Since mid-2015, HANIEL's portfolio, therefore, increased to five divisions, each of which holds a leading position in its field of expertise. One of these divisions is ELG. While supported by HANIEL in terms of administrative advice and strategic feedback, the operational responsibility and the determination and particularly the implementation of the strategy to be followed rests with ELG.

Initially focused on recycling metal scrap bound for the stainless steel industry, ELG has broadened its scope of services towards the trade in primary raw materials and the recycling of high-performance materials, in particular superalloys, titanium, and carbon fibers. Figure 18 shows the sales contribution of the different business

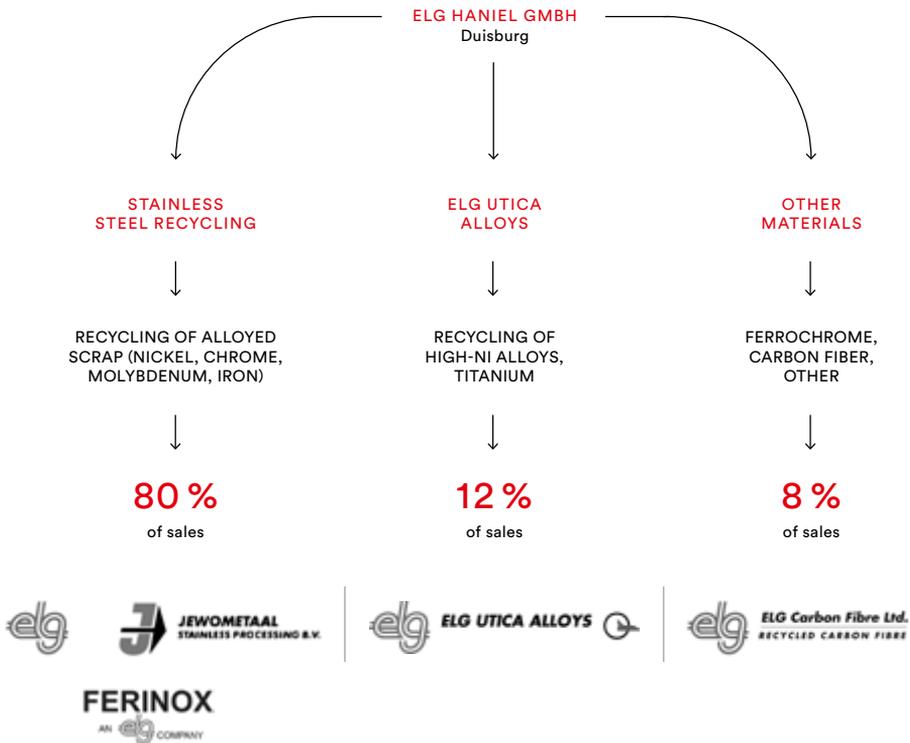
segments ELG is active in as well as ELG's main global brands.

ELG is committed to further internationalizing its activities and expanding on its sophisticated recycling processes. As mentioned in our first report, ELG strengthened its standing in the market segment of superalloys in 2013 by means of two acquisitions. ELG acquired the UK-based ABS Group ("ABS") in February 2013, in order to enrich our global network for the benefit of our customers. ABS maintains recycling facilities particularly for superalloys in the UK, USA, France and South Africa.

In July 2013, we acquired Metal Management Aerospace, Inc., situated in Hartford, Connecticut, USA ("MMA"), thereby continuing our growth strategy in aerospace scrap processing and revert management. With its cutting-edge processing facilities, extraordinary customer recognition, and well-trained employees, MMA complemented ELG's presence in this segment well.

In this part of ELG's recycling business, i. a. nickel-based turnings are treated in a multistep procedure in order for the material to be ready for shipment. ELG has invented and enhanced special processing equipment to enable it to reliably deliver the appropriate results that are requested by its customers.

Figure 18: ELG’s business segments and their contribution to ELG’s global sales



Adherence to the highest degree of quality in terms of compositions and purity is key to success in this industry segment. We achieve this by maintaining a strict focus on quality management and our long-term and trustful cooperation with our valued customers and suppliers. By 2015, the Hartford facility and the former ABS operations were

not only successfully integrated into the ELG Group, but together with the existing recycling activities for high-nickel alloys and titanium, they were merged into and renamed “ELG Utica Alloys Group” in order to emphasize the powerful unity of the Utica Division and display the strong connection with the ELG Group.

47,000

ppm
mass fraction of the biosphere

		C 6 870 ppm					
Co 27 37 ppm	Ta 73 8 ppm	Fe 26 47,000 ppm	Mo 42 14 ppm	W 74 64 ppm	Ni 28 150 ppm		
	Ti 22 4,100 ppm	Cr 24 190 ppm	Nb 41 19 ppm	C 6 870 ppm		V 23 410 ppm	
Cu 29 100 ppm	V 23 410 ppm	Co 27 37 ppm	Ta 73 8 ppm	Fe 26 47,000 ppm	Mo 42 14 ppm	W 74 64 ppm	Ni 28 150 ppm
Mo 42 14 ppm	W 74 64 ppm	Ni 28 150 ppm	Ti 22 4,100 ppm	Cr 24 190 ppm	Nb 41 19 ppm	C 6 870 ppm	Cu 29 100 ppm

MANAGEMENT APPROACH

07 / 1 ORGANIZATIONAL STRUCTURE AND GOVERNANCE

As the Group's holding company, ELG's headquarters in Duisburg feature the key central administrative departments at which information from ELG's decentralized operations and subsidiaries worldwide converges. Connecting the pieces of information with an ever-open ear for the requirements of ELG's shareholder, HANIEL, allows the Board of Directors to take the appropriate strategic decisions for the multinational, large-scale trading and processing house that ELG is.

The entire ELG Group is headed by Germany-based ELG Haniel GmbH, which is led by a Board of Directors consisting of (see below):

Few levels of hierarchy and lean personnel structures provide for direct communication and swift decision-making all through ELG's organization. We take pride in the fact that our decentralized operations and headquarters alike are managed where we do business – located, for instance, in global scrap processing hubs such as Duisburg (Germany), Sheffield (UK), Rotterdam (the Netherlands), Pittsburgh (USA) and Kaohsiung (Taiwan) for stainless steel, as well as Connecticut (USA), New York (USA) and North Carolina (USA) for superalloys and titanium. Our facilities are always close to the market and our management is always close to the shop floor – and that proximity is not only a physical one but even more so a matter of mindset.



Detlef Drafz
Chief Executive Officer ELG Haniel GmbH

Silke Landwehrmann
Chief Financial Officer ELG Haniel GmbH

Despite ELG's global footprint, there is a culture of continuous attunement in terms of targets, values and strategy. Several times per year, the leaders of our local operations attend management meetings involving ELG's top executives, whereby cohesion and mutual knowledge transfer is fostered further.

The same holds true for the relationship between ELG and our colleagues at HANIEL, who work only some five miles away. Regular management meetings, roundtables and workshops safeguard constant interaction and strong relationships not only with our shareholder but also with our sister companies within the HANIEL Group.

07 / 2 CORPORATE RESPONSIBILITY ORGANIZATION

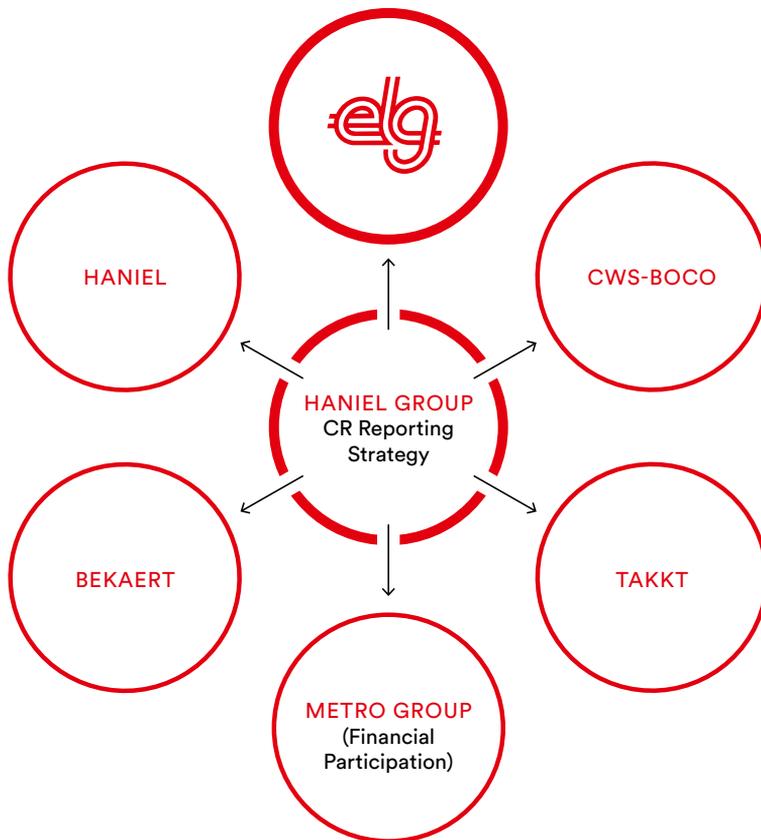
We have deliberately designed ELG's sustainability management and reporting to be a joint effort by all departments headquartered in Duisburg together with our decentralized operational units worldwide. We still believe that sustainability only lives up to its name if and as long as it flows through the veins of the entire corporate organization. This is particularly important in an organization as decentralized as ELG. We believe in the principle of small local units enjoying great entrepreneurial freedom paired with

wide-ranging responsibilities for profits, compliance, and sustainable business conduct. At the same time, each operation forms part of the global ELG family with a great sense of unity. Thus, gathering all the necessary information for our previous reports as well as this one, defining appropriate goals to achieve, and ultimately changing ELG for the better is always an effort by people throughout the company.

Since 2015, sustainability is the direct responsibility of ELG's CFO, Silke Landwehrmann, who is supported by a core Corporate Responsibility Team. As ELG's Corporate Responsibility does not form an isolated topic within our organization but naturally influences all businesses and projects, ELG's CEO, Detlef Drafz, as well as our local executives are closely involved in all CR activities.

To align the targets identified by ELG's Corporate Responsibility Team with HANIEL's group corporate responsibility strategy and to always stay up to speed on sustainability trends, a formal exchange process has been established with the corporate responsibility teams of HANIEL, TAKKT, CWS-boco, METRO and BEKAERT since 2015 (see Figure 19 on page 49).

Figure 19: Starting point and HANIEL's approach



07 /3 RISK / OPPORTUNITY MANAGEMENT

Entrepreneurial risks are commonly the flip side of business opportunities. Exploiting the latter to the benefit of ELG and its stakeholders is our management objective while it is imperative to identify and, where possible, minimize threats to our business success.

Opportunity management at ELG is aligned with our strategic direction. In a broad strategic planning process, our options are systematically assessed and initiatives are developed. Such initiatives are further fleshed out in the operational planning process which produces definite targets to strive for and measures to be taken. Both the strategic and operational planning processes are developed in close cooperation between the ELG Board of Directors and local management.

We see risk management as interlocking with the planning process, so the risks covered are not only of a financial nature but also comprise operational and external (market) risks. Risk management in the narrower sense is the responsibility of ELG's Internal Audit Department and comprises a periodic analysis of the risks identified as well as the definition, assessment, and monitoring of possible countermeasures.

Risk management reporting forms an integral part of our standardized planning and budgeting processes and is governed by guidelines and handbooks.

In accordance with long-term audit planning, all ELG subsidiaries are examined systematically by ELG's Internal Audit Department. As we follow a risk-oriented auditing approach, all subsidiaries of ELG are additionally subject to audits with varying focus areas, where appropriate conducted in close cooperation with HANIEL's Internal Audit Department. The efficiency of the risk management system is supervised internally and assessed externally in the course of annual auditing plans.

07 / 4 MEMBERSHIPS AND INITIATIVES

In order to drive our business forward and for the benefit of the industries we participate in, companies of the ELG Group are active members of the following associations and initiatives:

- Bundesvereinigung Deutscher Stahlrecycling- und Entsorgungsunternehmen e. V.
- Verband Deutscher Metallhändler e. V.
- Industrievereinigung Verstärkte Kunststoffe e. V.
- International Chromium Development Association
- Composite UK Trade Association
- Carbon Composites e. V.
- Bureau of International Recycling
- British Plastics Federation
- Aircraft Fleet Recycling Association
- Bundesverband der Deutschen Luft- und Raumfahrtindustrie e. V.
- Institute of Scrap Recycling Industries, Inc.
- Canadian Association of Recycling Industries
- National Demolition Association
- Association for Iron & Steel Technology
- International Titanium Association

Furthermore, ELG reports their sustainability efforts in accordance with the standards of the Global Reporting Initiative (GRI) and supports and promotes the Mission and Principles of the UN Global Compact.

07 / 5 MANAGEMENT APPROACH TO CORPORATE RESPONSIBILITY

As explained above, CR is not only inherent in our business model as such, it also influences virtually all decisions taken on a daily basis. In this sense all employees within ELG are ambassadors of CR rather than a specific department alone. ELG's CR Department merely monitors, supports and connects the corporate initiatives and takes a leading role in the communication both internally and externally. How this works can be seen in Figure 20 on page 53.

Building on this approach we conducted a formalized stakeholder dialogue which was transformed into ELG's Sustainability Materiality Matrix (see Figure 22 on page 55). We reported in detail in our first sustainability report what the mechanics of our stakeholder dialogue were and how the ELG Sustainability Materiality Matrix evolved.

We feel that we are still being asked to work on, respond to and explain some of the issues and clusters that formed the most important quadrant of the ELG Sustainability Materiality Matrix.

As we are in constant interaction with all of our stakeholders on various topics, we were, again, able to derive from this interaction the key focus areas we wanted to work on.

You have seen our report on these Focus Areas and the projects that form part of our CR efforts above on pages 8–30.

Figure 20: Stakeholder dialogue



Figure 21: CR milestones 2015**JANUARY 2015****EMPLOYEES**

Launch “Health & Safety PLUS” project with project team formation

FEBRUARY 2015**VALUE CHAIN**

Kickoff Fraunhofer UMSICHT “CO₂ Study”

MARCH 2015**INNOVATION**

Collaboration with Gordon Murray Design;
Development of iStream Innovative Carbon (innovative vehicle weight reduction work)

EMPLOYEES

H&S PLUS: Nomination of data owners for all 50 ELG operations

MAY 2015**COMMUNICATION**

Release of ELG “Sustainability Update 2014”

JUNE 2015**VALUE CHAIN**

Preliminary Report by Fraunhofer UMSICHT

INNOVATION

Financing/ sponsorship from “Innovate UK” procured for joint project

JULY 2015**EMPLOYEES**

H&S PLUS:
First preliminary Monthly Reports available for analysis

AUGUST 2015**COMPLIANCE**

Distribution of “Tattoo” campaign via e-mail to all employees worldwide

INNOVATION

On-site visit and data collection at ELG CF, Coseley

SEPTEMBER 2015**VALUE CHAIN**

Fraunhofer UMSICHT study completed

COMPLIANCE

Start of first e-learning module “Prevention of Corruption”

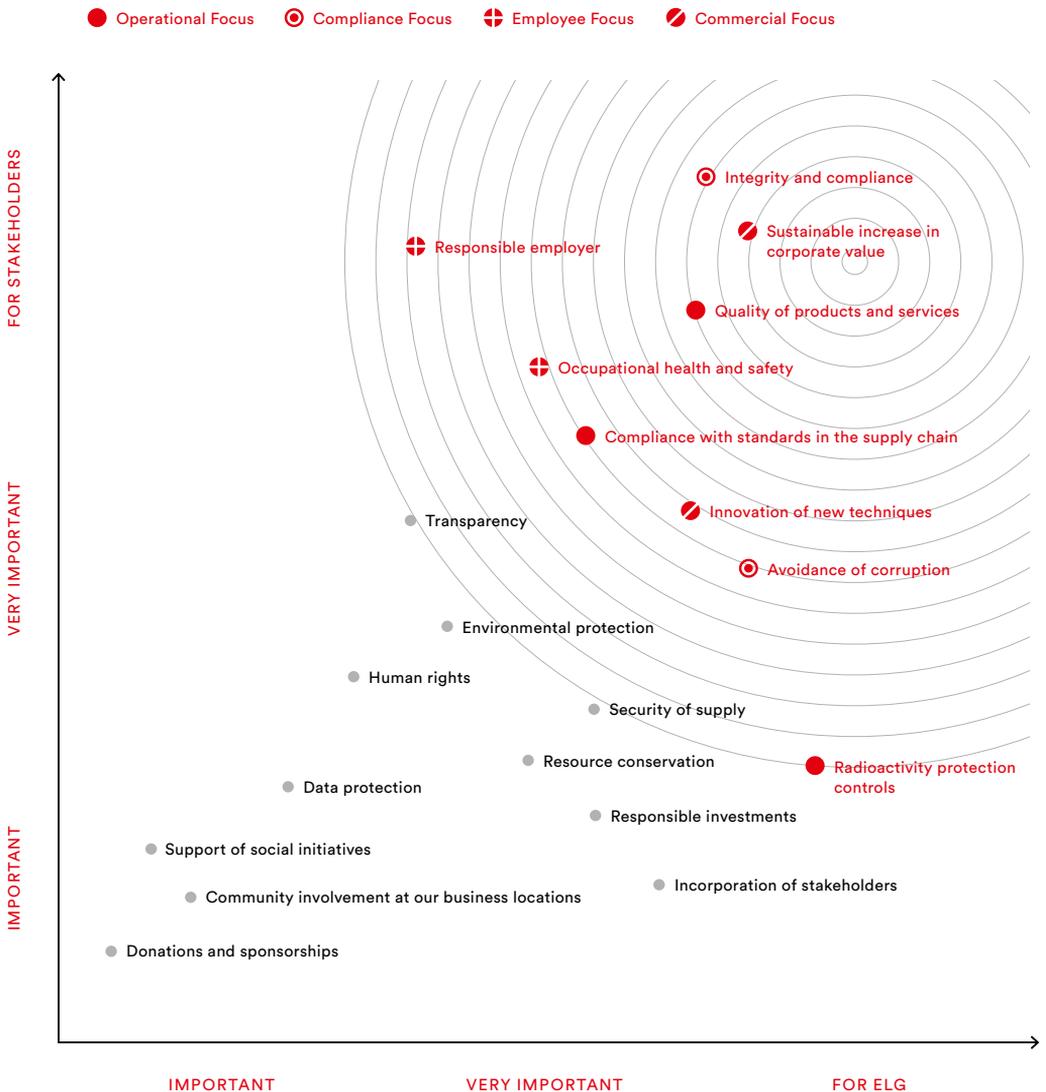
DECEMBER 2015**COMPLIANCE AUDIT**

Rollout of “Rules of Procedure 2015”

EMPLOYEES

First results of “Health & Safety PLUS”

Figure 22: Sustainability Materiality Matrix and clusters



37

ppm
mass fraction of the biosphere

Cr 24
190
ppm

Fe 26
47,000
ppm

Co 27
37
ppm

Ta 73
8
ppm

Ti 22
4,100
ppm

Cr 24
190
ppm

Ni 28
150
ppm

Ti 22
4,100
ppm

Cr 24
190
ppm

Nb 41
19
ppm

C 6
870
ppm

V 23
410
ppm

Co 27
37
ppm

Cu 29
100
ppm

V 23
410
ppm

Co 27
37
ppm

Ta 73
8
ppm

Fe 26
47,000
ppm

W 74
64
ppm

Ni 28
150
ppm

Mo 42
14
ppm

W 74
64
ppm

Ni 28
150
ppm

Ti 22
4,100
ppm

Cr 24
190
ppm

Nb 41
19
ppm

C 6
870
ppm

Cu 29
100
ppm

GRI-G4 SPECIFIC STANDARD DISCLOSURES

OPERATIONAL FOCUS

MATERIAL ASPECTS	PAGE	DMA, INDICATORS AND TARGETS	TIMELINE	EXTERNAL ASSURANCE
"Compliance with standards in the supplier chain", "Quality of products and services", "Radioactivity protection controls"	8 – 15	Target: Quantification of CO ₂ savings at the customer through the use of recycled material in comparison to the use of primary raw materials; the target is to obtain an increase in CO ₂ savings of 5% for each product category	By the end of 2017	NONE
		Ultimate target:* Zero radiation alarms at customers'	By the end of 2015	

COMPLIANCE FOCUS

"Integrity and compliance", "Avoidance of corruption"	17 – 21	Global rollout of an online training on compliance related issues worldwide, starting with "Prevention of corruption", the aim was to sensitize all employees worldwide and to create awareness and transparency	By the end of 2017	NONE
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EMPLOYEE FOCUS

"Responsible employer", "Occupational health & safety"	23 – 25	Global rollout of Health & Safety PLUS project, Zero Serious Accidents → deliberately impossible target; monthly Reporting to ELG from all legal entities	By the end of 2015	NONE
		1. Accidents at work below 15 per one million working hours; 2. Absence days below 7.5 per FTE; 3. Optimizing reporting and measures to reduce the numbers of injuries, absences and fluctuation	By the end of 2017	

COMMERCIAL FOCUS

"Sustainable increase in corporate value", "Innovation of new techniques"	27 – 30	Tripling carbon fiber production	By the end of 2015	NONE
		Development of innovative recycled carbon fiber products (isotropic mat)	By the end of 2017	

* Target desired, but in view of the natural occurrence of elevated radiation virtually unachievable

GRI-G4 CONTENT INDEX



GENERAL STANDARD DISCLOSURES	PAGE	COMMENTS AND CROSS-REFERENCES	EXTERNAL ASSURANCE
STRATEGY AND ANALYSIS			
G4-1	4–5		NONE
ORGANIZATIONAL PROFILE			
G4-3	2		NONE
G4-4	39, 45		NONE
G4-5	47		NONE
G4-6	42–43		NONE
G4-7	44		NONE
G4-8	39, 42–43		NONE
G4-9	40–41	https://www.haniel.de/en/creditor-relations/financial-reports/consolidated-financial-statements/ for details	NONE
G4-10	24–25		NONE
G4-11	24		NONE
G4-12	39–40		NONE
G4-13	44–45		NONE
G4-14	50	http://haniel.corporate-reports.net/ (pages 65 f. of the Annual Financial Report) for details	NONE
G4-15	51		NONE
G4-16	51		NONE
IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES			
G4-17	45	https://www.haniel.de/en/creditor-relations/financial-reports/consolidated-financial-statements/	NONE
G4-18	2–3, 48, 52		NONE
G4-19	55		NONE
G4-20	7, 8–15, 17–21, 23–25, 27–30		NONE
G4-21	7, 8–15, 17–21, 23–25, 27–30		NONE
G4-22	44–45		NONE
G4-23	44–45		NONE
STAKEHOLDER ENGAGEMENT			
G4-24	52–53		NONE
G4-25	52		NONE
G4-26	47, 52–53		NONE
G4-27	55		NONE
REPORT PROFILE			
G4-28	3		NONE
G4-29	2		NONE
G4-30	3		NONE
G4-31	U3		NONE
G4-32	3		NONE
G4-33	3	ELG did not seek external assessment for this report	NONE
GOVERNANCE			
G4-34	47		NONE
ETHICS AND INTEGRITY			
G4-56	17–21		NONE

ACKNOWLEDGMENTS

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