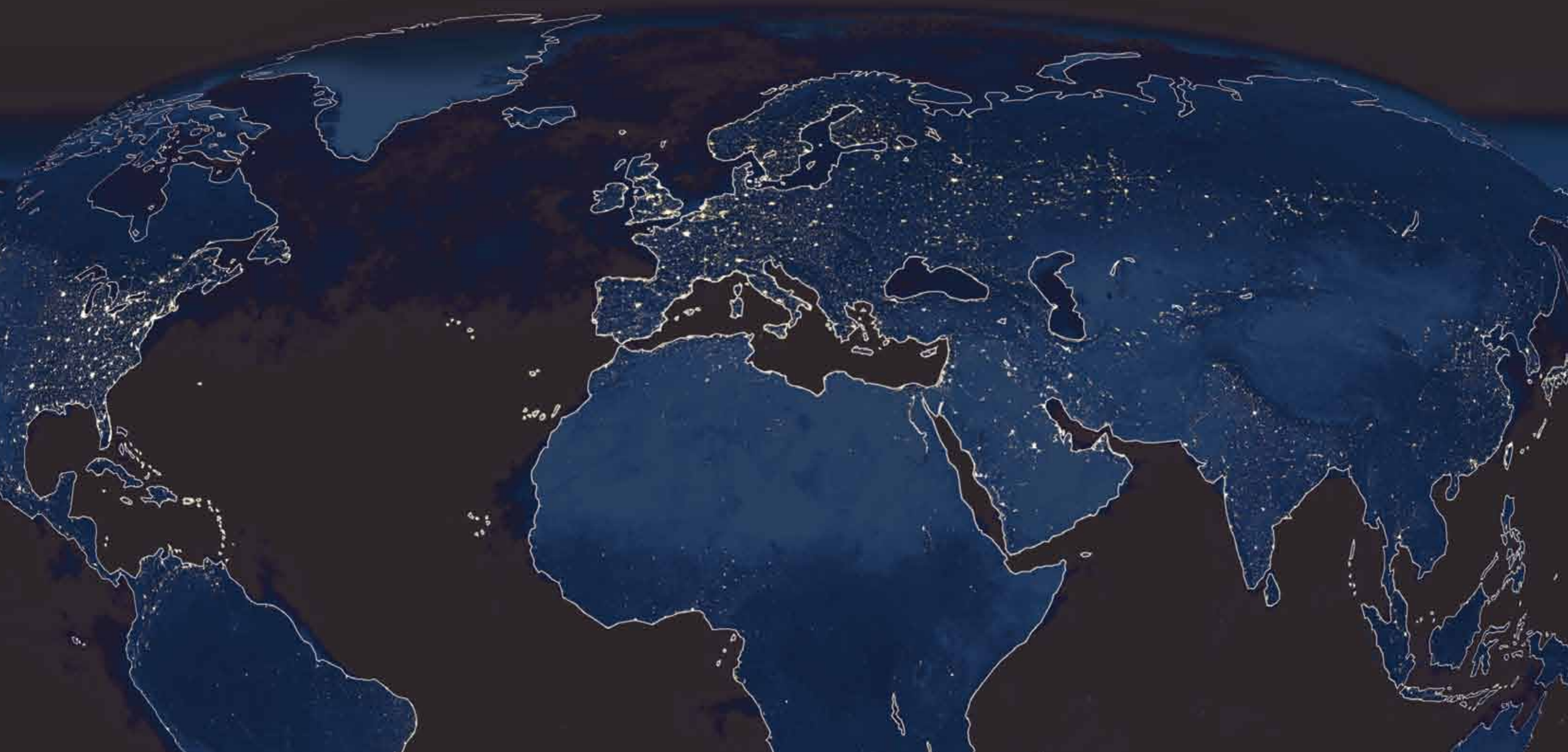
Through light, we care.

Sustainability Report of the Zumtobel Group

2009 / 10

zumtobel group

Artificial lighting accounts for 19 % of the global demand for electrical energy. So intelligent lighting has a big part to play in achieving greater energy efficiency.



Light determines the rhythms of all life on earth;
it’s the force behind all growth and development.

Light means life – it's the basis of human well-being.
Good light has a lasting impact on our health.

为了这颗行星及其居民的需求，奉献杰出的照明创新

Répondre aux besoins de la planète et de sa population avec des innovations très pointues dans le domaine de l'éclairage

Mit innovativen Lichtlösungen begegnen wir den Bedürfnissen von Mensch und Umwelt

Through light, we care.

Innovazioni illuminotecniche intelligenti: la nostra risposta alle esigenze del pianeta e dei suoi abitanti

Addressing the needs of the planet and its people with superior innovations in lighting

Hållbara innovativa belysningslösningar som både tillgodoser människans behov och tar hänsyn till vår jord

The basis for our sustainability reporting

This is the first Sustainability Report published by the Zumtobel Group, and it documents our main activities in this area.

The structure of the report takes its lead from the guidelines of the Global Reporting Initiative G3 (see "Index in line with the Global Reporting Initiative", p. 128) and from the findings of a stakeholder survey conducted in spring 2009 (see "Sustainability in the Zumtobel Group / Dialogue with stakeholders", p. 32).

The quantitative data was largely drawn from the SAP database software that is used across the Zumtobel Group. This applies, above all, to key financial indicators and data concerning employees. In addition, data was obtained by direct enquiries addressed to central functions and local contacts.

The report relates – unless otherwise indicated – to the Zumtobel Group and its two segments in the 2009 / 10 financial year. Comparable data from the previous year is available for most indicators. The Group's financial year begins on 1 May and ends on 30 April of the following year.

The scope of consolidation for the Lighting Segment is generally its European plants and / or activities, while for the Components Segment it generally includes all production plants worldwide. Our aim is to progressively expand the scope of consolidation.

The report is available for download as a PDF file on the Zumtobel Group website at www.zumtobelgroup.com/de/corporate_responsibility.htm The website also provides links to further information, primarily on the websites of the Group's brands: Zumtobel, Thorn, Tridonic and Ledon.

From now on, the Zumtobel Group intends to publish an annual Sustainability Report.

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Foreword

Dear Readers,

The 2009 / 10 financial year was a key year for corporate responsibility at the Zumtobel Group. In a process spanning several months, we identified the numerous sustainability activities already in place at the Group and from them forged a sustainability strategy. The first joint Sustainability Report published by the Zumtobel Group represents an important milestone in our work in this direction. At the same time it sounds the starting gun for our efforts to achieve the goals we have set ourselves in our four fields of action: Market, Employees, Processes and Integrity.

On the pages of this report, the Zumtobel Group sets out the meaning of its sustainability mission – "Through light, we care" – for the outside world in the shape of our markets, customers and investors, as well as for our own workforce. Innovative lighting solutions are our core competency and as we deliver these solutions we aim to take consistent account of human needs and the needs of our environment.

Sustainability in everything from our core business …

Our deliberate pursuit of sustainable development is nowhere more evident than in our core business. Through its brands, the Zumtobel Group offers solutions for the optimum use of light in both the indoor and outdoor sectors. Thorn, Zumtobel and Tridonic use their knowledge of lighting applications and the latest advances in lighting technology to arrive at the ideal balance between energy efficiency and light quality.

The main focus of our efforts in pursuit of energy efficiency is on reducing energy requirements during the service life of a luminaire embedded in an integral lighting solution. This is the phase during which the greatest savings can be achieved. Consequently, we are increasing our use of electronic or electronically dimmable ballasts and banking on LEDs as the technology of the future. At the same time, our brands are also tasked with raising awareness levels among customers.

The EU Ecodesign Directive, which took effect on 1 September 2009, will gradually ban the sale of incandescent light bulbs. In spring 2010, the, the Zumtobel Group responded by launching a range of innovative and energy-efficient LEDON LED retrofit lamps. Through this step, the Zumtobel Group is playing an active part in supporting compliance with the Kyoto Protocol, because 19 per cent of the electricity generated worldwide is consumed by artificial lighting. Commercial property and outdoor lighting currently account for a good two-thirds of that amount.

… to our production operations and supply chain

The sustainability strategy that we have drawn up also provides a frame of reference for our Code of Conduct and the relevant Group guidelines, management systems and continuous improvement processes in the areas of Quality, Environmental Protection, Occupational Health & Safety and Risk Management. This will support our efforts to ensure efficiency, quality and good governance. In some cases, our suppliers are also subject to the same provisions.

Setting the stage for the future

The Zumtobel Group's engagement in this respect is founded on the conviction that only responsible corporate leadership can take the company forward into a bright future. This is particularly clear in times when we must expect to see prices for certain raw materials and electronic components rise and when the construction sector has yet to recover from the financial and economic crisis. While the Zumtobel Group has been able to turn in a respectable performance despite the crisis, the economic outlook is still not stable.
Nevertheless, we are continuing to invest in new products and technologies and in LEDs in particular. This is the time when the stage is set for the future and we must align our approach with the market environment of the future. In this context, the topic of energy efficiency, reflected in high-efficiency lighting, energy-efficient light sources and intelligent control systems, remains an important long-term growth driver.
We would like to thank all of our employees who have made a crucial contribution to the success of the Zumtobel Group and its engagement for greater sustainability. And we would also like to thank all our customers, suppliers and shareholders for the trust they invest in us.
I hope you'll find that the Zumtobel Group's first-ever Sustainability Report makes for interesting reading.

Yours sincerely,

Dr. Harald Sommerer
CEO Zumtobel Group

1. Company profile

1.1. Introduction

The Zumtobel Group's mission

"We aim to be the world authority on lighting.

As a Group of leading lighting brands and companies we provide complete professional lighting solutions, luminaires, lighting management and lighting components for indoor and outdoor applications.
Driven by innovation and quality in all our business processes, we aim to be the first-choice global partner for our customers.
As we exceed the expectations of our customers, we offer best-in-class products and services while remaining fully aware of our responsibility to the environment and society."

1.2. The Zumtobel Group – a global player in the lighting industry

The Zumtobel Group based in Dornbirn, Austria, ranks among the global market leaders in the lighting industry. With its three internationally established brands, Thorn, Zumtobel and Tridonic and the recently founded Ledon brand for the LED lamp business, in the 2009 / 10 financial year the Group employed a workforce of 7,329 and posted consolidated revenues of EUR 1.1 billion.

Innovation and quality across the Group

The Zumtobel Group supplies its customers with luminaires for professional lighting and integrated lighting solutions for indoor and outdoor applications. With its control gear, lighting management systems and LED modules, the Group is one of the world's top players.

Driven by innovation and quality in all its business processes, the Zumtobel Group is aiming to be the leading company in the worldwide lighting industry and the first-choice provider for its customers. The Group's primary focus is on energy-efficiency and optimum lighting quality. Since 2001, the Zumtobel Group has been progressively expanding its LED activities. By founding Ledon Lamp GmbH in 2009, the Group first entered the B2C (business-to-consumer) sector.

The Group's global presence currently comprises 22 production plants on four continents, as well as sales companies and sales representatives in over 70 countries. Most of the production plants are located in rural areas where the Group is a major employer. At the same time, the Zumtobel Group also has strong ties with its home location in Dornbirn, in the Vorarlberg region of Austria.

From family firm to listed company

The present-day Zumtobel Group originated as Elektrogeräte und Kunstharzpresswerk W. Zumtobel KG, which was founded in Dornbirn in 1950. For over 50 years, the Zumtobel family has pursued the continuous expansion of the company's business, particularly in the German-speaking markets, through a mixture of organic growth and minor acquisitions. The founder, Dr. Walter Zumtobel, was succeeded at the helm by his two sons Jürg and Fritz Zumtobel.

The company has been a stock corporation since 1976. With the acquisition of the Thorn brand in 2000, the family-run business began to step up its international focus. The initial public offering came on 12 May 2006 when the company was first listed on the Vienna Stock Exchange. To this day, the Zumtobel family remains the largest single shareholder, with a 35 % stake in Zumtobel AG. The remaining 65 % of the shares are in the free float, with the majority being held by institutional investors and a number of private individuals.

Key financial indicators, 2009 / 10 financial year

Revenues	EUR 1,117.3 million
Adj. EBIT	EUR 51.5 million
Net income (loss) *	– EUR 67.0 million
Equity	EUR 351.6 million; equity ratio 35.8%
Employees **	7,329 (of which 1,700 at company headquarters in Dornbirn) plus 147 apprentices

* Net income for 2009 / 10 was negatively influenced by non-cash impairment charges to goodwill in the amount of EUR 68.3 million

** On balance sheet date 30 April 2010 / Full-time equivalent incl. contract workers

Group structure: four brands in two segments

The Lighting Segment is represented by the Thorn and Zumtobel brands. The Component Segment comprises the Tridonic and Ledon brands. The parent company Zumtobel AG performs overarching management and service functions.

Dr. Andreas J. Ludwig was Chief Executive Officer (CEO) of Zumtobel AG until 30 April 2010. Effective 25 April 2010, Dr. Harald Sommerer was appointed to the Management Board, becoming CEO on 1 May 2010. The Chief Operating Officer (COO) is Martin Brandt and the Chief Financial Officer (CFO) Thomas Spitzenpfeil.

The CEO is responsible for the Components Segment, which is managed as a separate subsidiary under the Tridonic brand. Since the summer of 2009, the Management Board has been responsible for the Lighting Segment; and since 2009, the extended Management Board has also included the position of Executive Vice President (EVP) Technology for the Zumtobel Group, held by Klaus Vamberszky.

Organisational flowchart

LED light source	Control gear	Luminaires	Lighting Management	Lighting solutions
LEDON	TRIDONIC	ZUMTOBEL	ZUMTOBEL	ZUMTOBEL
TRIDONIC		THORN	THORN	THORN
			TRIDONIC	

With its lighting and components business and its LED activities, the Group covers all five stages of the value-added chain in the professional lighting sector (see chart "The value chains of the Lighting and Components Segments").

THE LIGHTING SEGMENT: THORN AND ZUMTOBEL

Together the Thorn and Zumtobel brands posted revenues of EUR 819.4 million in the 2008/09 financial year and employed 5,261 people.

THORN

Lighting people and places

The Thorn brand is a highly recognised global supplier of professional indoor and outdoor lighting, lighting control systems and emergency lighting. Its long, successful history began with the Electric Lamp Service Company founded by Jules Thorn in 1928. Since it was acquired in 2000, the Thorn brand with its widespread geographical presence has made a major contribution to the internationalisation of the Zumtobel Group.

Thorn's core competencies include light fittings not only for urban spaces and public buildings, roads and tunnels, but also for sports stadiums and shopping malls, hospitals, offices and educational establishments. The brand's main customer groups include distributors, electrical contractors and installers, consultants and specifiers, as well as municipalities. Unlike the Zumtobel brand, Thorn channels almost all its project business through distributors.

By delivering technical innovations to broad-based target groups, the brand has come to stand for reliability, outstanding customer service, high functionality and technically advanced design.

For further information visit www.thornlighting.com

ZUMTOBEL

We want to use light to create worlds of experience, make work easier and improve communications and safety while remaining fully aware of our responsibility to society and the environment.

The Zumtobel brand is a leading supplier of integral lighting solutions that bring the interplay of light and architecture to life. Through a combination of innovation, technology, design, emotion and energy efficiency, the brand generates unique customer benefits. Project business accounts for 100% of the brand's activities.

As an innovation leader, Zumtobel offers a comprehensive range of premium luminaires and lighting control systems across the full range of applications in professional indoor lighting. Applications include Offices and Education, Presentation and Retail, Hotel and Wellness, Health and Care, Art and Culture, and Industry and Engineering. The brand's customer base comprises mainly building owners and investors, electricians, lighting and electrical designers and architects.

The ongoing development of the product portfolio is driven not only by the latest advances in research and technology but above all by the brand's long-standing collaboration with leading international architects, lighting designers and artists.

For further information visit www.zumtobel.com

THE COMPONENTS SEGMENT: TRIDONIC AND LEDON

In the 2009 / 10 financial year, this segment posted revenues of EUR 366.6 million and employed a total workforce of 1,775. people.

TRIDONIC

Enlighting your ideas

Tridonic is an innovative supplier with a wide-ranging product portfolio. The brand develops, manufactures and markets lighting components, lighting management systems and LED modules.

As a leading OEM supplier, Tridonic mainly serves luminaire manufacturers worldwide. Some 19 % of its revenues are accounted for by intercompany sales to the Thorn and Zumtobel brands.

Tridonic customers know what kind of light they want. Through committed partnerships, expert service skills and technical know-how, Tridonic enables its customers to implement functionally and economically superior lighting solutions. The brand sets new standards with its uncompromising quality and sophisticated production technology. Over 200 inventions and more than 2,000 patents document Tridonic's innovative capabilities.

For further information visit www.tridonic.com

LEDON

Ledon – My light

The Ledon brand is the Zumtobel Group's seed-bed for LED and OLED technology. Three companies are currently grouped under the Ledon brand: the two technology suppliers Ledon Lighting in Jennersdorf, Austria with 120 employees and Ledon OLED Lighting in Dresden, Germany with 10 employees; and Ledon Lamp in Dornbirn, Austria with 10 employees to handle sales of LED lamps to consumers.

As a producer of LED modules, Ledon mainly supplies the Zumtobel Group brands Thorn, Zumtobel and Tridonic. Through LEDON Lamp, the Group is opening up a B2C sales channel for its premium-quality LED lamps, thereby offering a technologically and environmentally attractive alternative to conventional incandescent light bulbs.

For further information information, please see p. 57 (see information box "LEDs" in "Product Stewardship" chapter) and visit www.ledonlighting.com and www.ledon-lamp.com

1.3. Corporate strategy and objectives

Zumtobel Group: Corporate strategy and strategic management

In line with its mission statement, the Zumtobel Group aims to become the world authority on lighting. The company strives to offer its shareholders, customers and employees attractive long-term prospects for the future.

The Group's strategy is based on three growth drivers: innovation, energy-efficiency and new markets. To ensure effective strategic management at Group level, in the 2008 / 09 financial year the company introduced a balanced scorecard system aligned with the Group's long-term strategic objectives. In 2009, the topic of sustainability was anchored in the balanced scorecard as a core element of corporate strategy and six top sustainability goals were defined. (See "Sustainability in the Zumtobel Group", p. 31).

For further information, please visit www.zumtobelgroup.com and see the Zumtobel Group's annual and financial reports.

1.4. Development of business in the 2009 / 10 financial year

The 2009 / 10 financial year (1 May 2009 to 30 April 2010) was shaped by the effects of the most severe global recession in more than 60 years and will undoubtedly go down as one of the most turbulent in economic and stock market history. Against the backdrop of this extremely difficult operating environment, the performance of the Zumtobel Group can be considered quite respectable. This is demonstrated by operating profit before special effects of EUR 51.5 million and a clearly positive free cash flow of EUR 39.2 million. A decisive factor for the development of business during the past year was the company's timely implementation of an extensive cost reduction programme – "Excellerate" – beginning in autumn 2008.

The challenge now is not to lose sight of the Group's potential for growth and, in spite of ongoing cost optimisation, not to save in the wrong place. Accordingly, the Zumtobel Group is continuing specifically directed investments to expand its outstanding technology position, even though the economic crisis has not ended. Our expenditures for research and development (R&D) with a focus on energy efficiency and LEDs rose by 9.5 % to EUR 52.1 million in 2009 / 10. Our business in the future-oriented area of LED technology continued to grow during the reporting year, with revenues from LED-based products

rising 37.0% to EUR 65.9 million. Despite the crisis, the training of apprentices continued at a high level in the 2009/10 financial year, with the number of apprentices actually increasing from 133 to 147.

In addition to improving cost efficiency, our activities in the reporting year concentrated on protecting liquidity and thereby maintaining our sound balance sheet structure. The equity ratio equalled a satisfactory 35.8% on 30 April 2010, despite massive non-recurring effects, above all from impairment charges to goodwill. Net financial liabilities were cut by one-quarter year-on-year to EUR 121.9 million.

Despite continuing limited visibility and the late cyclical nature of the Group's business, the Management Board of the Zumtobel Group views the 2010/11 financial year with cautious optimism and is forecasting an improvement in revenues and an increase in operating earnings for the Group as a whole. The long-term outlook for the Zumtobel Group remains positive. This optimism is supported by the expected continued dynamic expansion of LED-based products and the steady demand for energy-efficient lighting systems.

For further information, please visit www.zumtobelgroup.com and see the Zumtobel Group's annual and financial reports.

Major awards and honours for the Zumtobel Group and its brands since 2007

Award	Group company	Presented by	Date
DALI Award	Tridonic	AG DALI (ZVEI)	2007 and 2008
Lights of the Future (for LQ Chandelier and Cielos)	Zumtobel brand	Messe Frankfurt Exhibition GmbH + Rat für Formgebung	2008
Design Plus Light+Building (for Tempura and Cielos)	Zumtobel brand	Messe Frankfurt Exhibition GmbH + Rat für Formgebung	2008
Strongest brand for architects	Zumtobel brand	AIT magazine in cooperation with BI communication	January 2009
EMILAS (Energy Management and Innovation in Lighting Award Scheme) for Gateshead Council's Civic Centre	Thorn	Lighting Industry Federation	May 2009
Factory of the Year 2009 for the new Spennymoor plant	Thorn, Tridonic	Cranfield School of Management together with Works Management magazine	September 2009
Top 3 best Austrian corporate websites	Zumtobel Group	Hallvarsson & Halvarsson Agency	December 2009
Top 10 sustainable companies in Austria	Zumtobel Group	Center for Corporate Citizenship Austria	October 2009
Twelve iF Product Design Awards for outstanding product design, e.g. in 2009 for Linaria, Seamless, ZBOX, Supersystem and Aero II Hybrid and in 2010 for: Ecoos, Ciria and Discus	Zumtobel brand	International Forum Design GmbH	2007 – 2010
DALI Award, 2nd prize	Zumtobel brand	AG DALI (ZVEI)	2010

1.5. Corporate governance

A tradition of good governance combined with fair and open communication

At the Zumtobel Group, corporate governance is experienced through the management and monitoring of the Group in line with the principles of sustainable development and long-term value creation. This goes hand-in-hand with a commitment to transparent, fair and open communication with all stakeholders.

Zumtobel AG has announced its intention to voluntarily comply with the Austrian Corporate Governance Code as amended in January 2009. As in previous years, Zumtobel AG complied with nearly all provisions of the code in 2008/09. Where this was not the case, the company published an appropriate explanation. The Group's mission statement and Corporate Values are key aspects of the long-term value creation process. Other important factors for safeguarding the value of the Zumtobel Group include the Code of Conduct and Corporate Policies, as well as the risk management system, the system of internal controls and the corporate internal audit function. The risk management system takes account of the critical elements of sustainability, such as environmental impacts and shifts in HR structures. To reinforce awareness of the need for correct treatment of insider information, the Zumtobel Group has also drawn up its own insider guidelines ("INLine").

In 2004 the Zumtobel Group became a member of the Partnering Against Corruption Initiative (PACI, www.weforum.org/paci) of the World Economic Forum in Davos. This multi-stakeholder initiative, founded that same year, brings together leading international industrial companies and major social organisations to combat supplier-side corruption in the private sector. The PACI's mission is to develop multi-industry principles and practices that will result in a competitive level playing field, based on integrity, fairness and ethical conduct. The Zumtobel Group Code of Conduct was drawn up on the basis of these principles.

To safeguard integrity and ensure consistent compliance with internal and external guidelines, rules and legislation by all its employees, the Zumtobel Group is systematically expanding its compliance organisation. To make sure that this applies to all business processes, we will be making the existing compliance management structures and processes even more transparent in future. The basic underlying concept for the above measures has already been approved and implementation will commence in the first quarter of 2010/11.

For further information on the Code of Conduct see p. 28 (see section on "Sustainability management"). Further information on corporate governance in general can be found on the Zumtobel Group website www.zumtobelgroup.com and in the Group's annual and financial reports.

The brightness, colour, dynamic and intensity of light all influence our emotional perception.

2. Sustainability in the Zumtobel Group

2.1. Introduction

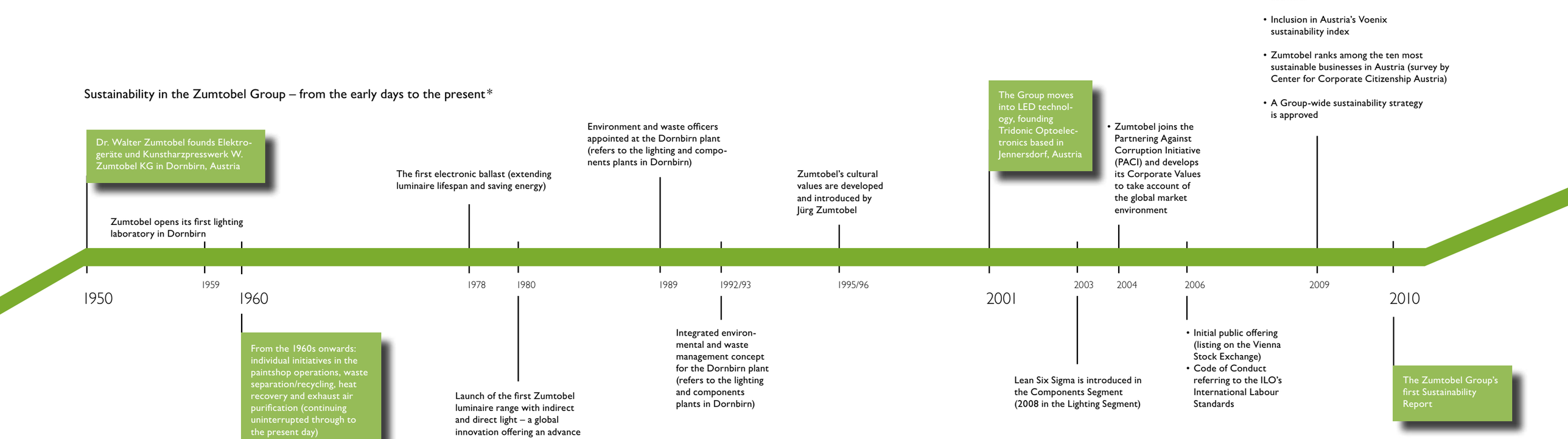
The Zumtobel Group began as a family-run company in 1950; since then it has grown substantially, continually investing in research, products and markets along the way. As a result, a profound understanding of sustainability has become hard-wired in the business over the decades, and is evidenced in many aspects of the Group's ongoing development (see Timeline, p. 125). Research and development and environmental protection in the Group's production operations are the key areas in which these principles are applied.

At its core, the lighting and components business is intrinsically linked with the concept of sustainability. Artificial lighting accounts for 19% of the energy consumed worldwide: because of this strong correlation to overall energy consumption, promoting energy efficiency in lighting can achieve a major impact. Light also promotes quality of life by creating environments where people can feel safe and well. The brand's distinctive lighting solutions point the way forward in the way they balance the twin needs of energy efficiency and light quality.

In order to manage sustainability issues more effectively across the Group and to communicate about them transparently, the Zumtobel Group launched a programme to coordinate and oversee its many activities in this field early in 2009. The result was a sustainability strategy, officially adopted – with the creation of appropriate organisational and reporting structures – at the end of 2009.

* The complete sustainability chronicle can be found in the chapter "Data and facts".

Sustainability in the Zumtobel Group – from the early days to the present*



2.2. Sustainability – strategy and organisation

A sustainable approach to business has been a defining feature of the Zumtobel Group ever since the company's founding. In autumn 2009, the Group approved a dedicated sustainability mission statement and strategy – enabling the Zumtobel Group to transparently and comprehensively document its commitment to sustainability in future.

Sustainability mission and strategy – developed with stakeholder input

The sustainability mission statement is closely linked with the element that constitutes the Group's core business, light:

THROUGH LIGHT, WE CARE. ADDRESSING THE NEEDS OF THE PLANET AND ITS PEOPLE WITH SUPERIOR INNOVATIONS IN LIGHTING.

The sustainability strategy covers four fields of action – Market, People, Processes and a fourth, overarching field, Integrity. Guiding principles for each field of action (see "sustainability strategy" graphic) serve as the basis for defining strategic goals and key indicators for the 2010/2011 financial year, with the aim of achieving measurable improvements year on year. Sustainability is therefore a component of the balances scorecard as redefined for the 2010/2011 financial year, making it an integral element of the Group's strategy.

In response to growing interest, in particular from customers and investors, the Zumtobel Group conducted a survey of its key stakeholders on the topic of sustainability (see Dialogue with Stakeholders section). In spring 2009 - based on the feedback from the survey - employees from different departments within the Group analysed and evaluated existing activities in the sustainability field. Drawing on these results the Zumtobel Group produced a draft outline for its sustainability strategy. The strategy and its component elements were subsequently agreed with the specialist divisions and approved by the specially convened sustainability committee in late November 2009.

Sustainability structures – hard-wired into Group management

Sustainability enjoys high priority at the Zumtobel Group and as a consequence responsibility for this area lies with the CEO. Data gathering is coordinated by corporate controlling, while reporting is handled by the corporate communications department.

The sustainability committee – a cross-functional steering group, again chaired by the Zumtobel Group CEO – meets every six months, bringing together the relevant departmental managers at Segment and Group level. The participants in the sustainability committee are representatives of the operational companies from the marketing, product management, in-process environmental protection, process management, supply chain management, logistics and human resources departments as well as representatives of corporate functions for Human Resources, Investor Relations, Internal Audit, Group Technology, Communications and Risk Management.

Specialists in the field have recognised Zumtobel's many activities in pursuit of sustainability: in November 2009 the Zumtobel Group was listed among the top ten sustainable companies in Austria, moving further up the rankings than any other company by comparison with the previous year. This survey is conducted annually by Center for Corporate Citizenship Austria (see www.ccc-austria.at).

ZUMTOBEL GROUP'S SUSTAINABILITY STRATEGY – THE FOUR FIELDS OF ACTION

Our Market
We set standards in the marketplace by providing energy-efficient and resource-conserving light sources and components, luminaires, lighting control systems and lighting solutions, based on innovation, our knowledge of light in its multiple applications and the requirements of our customers.

Our People
As an employer, we offer our employees optimum personal and professional development opportunities in the world of light. They impress our customers with their knowledge and commitment and thereby safeguard the long-term success of our company.

Our Processes
We execute our commitment to sustainability by implementing efficient and resource-conserving business processes, which we strive continuously to improve.

Our Integrity (overarching field)
Through integrity and transparency in all our business processes, we create sustainable value for all our stakeholders.

The individual principles of each field of action are presented in detail on the Group's website:
www.zumtobelgroup.com

2.3. Sustainability standards and management systems

The Zumtobel Group's efforts to take appropriate account of human and environmental needs in its business activities have developed steadily as the company has grown. This is reflected, for example, in the Lighting Segment's quality policy and its guidelines on environment and occupational health and safety, and in the Components Segment's policy for quality, environment, occupational health and safety and risk management. Furthermore, ethical standards, continuous improvement processes and quality, environment and occupational health and safety management systems have been established in the Group's various divisions. These measures are focused on delivering efficiency, quality and corporate governance and are now encompassed within the wider framework of the sustainability strategy.

High ethical standards

High ethical standards in all business processes sustainably strengthen the Zumtobel Group's competitiveness and market position. The overarching field of action, integrity, emphasises this aspect of the sustainability strategy. The Corporate Values and a corporate Code of Conduct are binding for all Group employees. These values and rules help them to take the right decisions and to always act fairly; as trustworthy and unprejudiced partners towards both internal colleagues and external partners. New employees receive both the Corporate Values and the Code of Conduct in their welcome folder.

Zumtobel's "cultural values" were drawn up as early as 1995 and 1996, at the initiative of the then CEO Jürg Zumtobel. After the initial public offering of 2006 they were revised and developed to apply to the whole Group, now a truly international organisation. These values relate to customers, employees, business processes and integrity. The Corporate Values were communicated to employees via a range of introductory activities, and through documentation provided in a brochure, on the intranet and in other media.

The Zumtobel Group drew up its corporate Code of Conduct after joining the Partnering Against Corruption Initiative (PACI) of the Davos World Economic Forum in 2004 (see "Corporate Governance" section). The code lays down global standards for the conduct of all Zumtobel Group employees. Parts of it also apply to external third parties, e.g. to suppliers (see chapter on "Suppliers"). With the Code of Conduct, the Zumtobel Group pledges to uphold the employment and working conditions recommended by the International Labour Organisation (ILO).

Improved efficiency and quality through Lean Six Sigma

Lean Six Sigma management methods are used in both Group Segments in order to achieve ongoing quality improvements (see "Lean Six Sigma" information box). Holistic process management ensures resource-efficient production, avoidance of negative environmental impacts and higher safety standards for employees. The two segments apply Lean Six Sigma in different ways, and each of them has appointed a dedicated Lean Six Sigma programme manager.

The implementation of Lean Six Sigma in the Lighting Segment began in 2008 and is currently limited to product development, production and the supply chain. The use of this methodology is included in the Segment's Quality Policy. In the future, the Sales Excellence project, which aims to achieve comprehensive and sustainable efficiency improvements in sales operations, will also incorporate Lean Six Sigma as it progresses.

The Components Segment first began to introduce Lean Six Sigma at the Dornbirn plant in 2003. Since then the methodology has been rolled out across all the components plants. The Components Segment implements Lean Six Sigma projects not just in the production sector but also to improve processes in the supply chain, in research and development, in marketing and in customer service. Work is currently under way to expand the methodology by combining it with the comprehensive EFQM (European Foundation for Quality Management) total quality management system.

Certified management systems for quality, environment and health & safety

The Zumtobel Group's rigorous environment and quality management systems are certified to ISO standards. Clear lines of responsibility and the documentation of the process structure lay the foundations of effectiveness and efficiency. Certification is also communicated to customers, official bodies and the public as an additional means of building trust in the Group's operations. To date, all Zumtobel Group plants – with the exception of two US plants – are certified to ISO 9001 (see "Quality and Safety" section), and nine plants have achieved ISO 14001 (see "Environment Management" section) while the components plants in Dornbirn and Innsbruck are certified to OHSAS 18001 (see "Occupational Health and Safety" section).

Outlook – building a credible commitment to sustainability

The Zumtobel Group plans to develop its sustainability initiatives in a steady and credible way. Regular meetings of the sustainability committee, transparent and systematic reporting in line with the recognised standards of the Global Reporting Initiative, and embedding the principle of sustainability within the balanced scorecard system will all help to further consolidate sustainability as an integral element of the Group's operations.

LEAN SIX SIGMA METHODOLOGY

What is Lean Six Sigma?
The Six Sigma method aims to achieve zero defects and optimum quality ("Six Sigma Quality"). Combining this initiative with the principles of Lean Management yields the Lean Six Sigma methodology. Its aim is to anticipate and remove the sources of defects, improving the quality of production and products, while at the same time minimising activities that do not create value.

Where did this methodology originate?
It was first used in Japan in the 1970s, reaching a wider audience when it was applied in the automotive industry.

What is it that makes Lean Six Sigma special?
The ongoing analysis of relevant indicators is used to identify potential improvements. The initiatives derived from this analysis are organised in projects, with a specially trained person taking responsibility for each project. Responsibility is allocated in accordance with the level of training completed by each individual. This system gives employees the opportunity to gain qualifications and to make a personal contribution to improving efficiency in the supply chain, production and sales.

What are the benefits of Lean Six Sigma in sustainability management?
Optimising process quality cuts costs and improves the end products as well as delivering improvements in terms of resource-efficient production, the prevention of negative environmental impacts and enhancing employee safety. As a result, Lean Six Sigma helps support the Zumtobel Group's integrated strategic approach and manage it more effectively.

Our market

Our processes

Our employees

Our integrity

The Zumtobel Group's TOP sustainability goals

Area	Description	Target date
Sustainable products	**Zumtobel** Raise proportion of "eco+ products"* to 15% of total revenues	by 2010/11
	Raise proportion of luminaires with electronically dimmable ballasts to 20% of total unit sales	by 2010/11
	Thorn "Greenliners" – proportion of sustainable products: Creation of a definition of "Greenliners" incl. target values; from 2011/12 onwards, roll-out of "Greenliners" for indoor/outdoor luminaires in Europe	by 2010/11
	Replacement of magnetic ballasts by electronic ballasts: Cut proportion of luminaires with magnetic ballasts to 14%	by 2011/12
	Tridonic Increase proportion of revenues accounted for by energy-efficient products** to 67.5% (2010/11) and in the medium term to 80%	by 2010/11 and 2013/14
	Proportion of revenues accounted for by LEDs EUR 100 million One-third of consolidated revenues	by 2010/11 by 2014/15
Certification to ISO 14001	**Lighting plants:** All European plants	by 2010/11
	Component plants: All electronics plants worldwide	by 2010/11
Energy consumption in the production sector	**European lighting plants:** Establishment of a system of key indicators and definition of target values for a carbon-equivalent per luminaire produced	by 2010/11
	Components plants worldwide: Establishment of a system of key indicators and definition of target values for a carbon-equivalent per unit produced	by 2010/11
Employees	Reduction of accident frequency reported as TRI*** Target: TRI = 10	by 2014/15
Integrity	Systematic expansion and even more transparent design of the compliance management system to ensure full compliance and complete integrity	ongoing

*Eco+ relates to indoor lighting only
**See "Product Stewardship" section for a definition of energy-efficient products
***TRI = total recorded injuries per million hours worked

2.4. Dialogue with stakeholders

The Zumtobel Group engages in an ongoing dialogue with its stakeholders covering all the key issues affecting its business, feeding the results into the strategies that drive the development of its various divisions. As a result, the Group is constantly aware of the needs of people and the environment, not least from the point of view of its stakeholders, as it manages its operations.

A strong tradition of engagement with stakeholders

This dialogue is focused on customers, collaborators and network partners, employees, investors and politics. Each individual dialogue is adapted to the needs of the relevant stakeholder group:

Customers:
The managers of Zumtobel Group brands maintain very close and direct contact with their customers. The Thorn and Zumtobel brands, for example, actively involve their customers in development processes – through initiatives such as product development workshops (see "Research and development" section). The brands also promote an awareness of sustainable lighting solutions among their customers through personal consultations, training and cross-media communications (see "Customer Dialogue" section).

Network partners:
Working in cooperation with academic and scientific institutions, artists, designers and architects – its network partners – the Zumtobel Group promotes energy efficiency and light quality, developing sustainable lighting solutions and special-purpose luminaires to achieve a balance between these requirements (see "Research and development" section and the chapter on "Sponsorship").

Employees:
The Zumtobel Group promotes transparent communication among its employees and between employees and management. This involves initiatives including decentralised, personal information updates provided by local management, regular discussion forums – like the newly updated Klartext and Z-Net events – and employee surveys. Employees are also kept up to date through the employee magazine, a regular newsletter and the intranet (see chapter on "Employees").

Investors:
The Zumtobel Group has an outstanding track record on investor relations, updating investors and analysts on a regular basis with initiatives including investor conferences and roadshows, quarterly telephone conferences for analysts and the annual Capital Markets' Day. In 2007, the Group's Investor Relations department won the David Award presented by the IVA (Austrian investors association), receiving praise from the judges for its compact and comprehensive corporate information and its effective strategies for reaching out to private investors. (see "Investor Relations" on the Group's website www.zumtobelgroup.com).

Suppliers:
Both the Lighting and Components Segments are focused on building long-term supplier relationships, making supply management a high priority for both segments. The Components Segment has a particularly impressive track record for building strong, collaborative relationships that have lasted over many years (see chapter on "Suppliers").

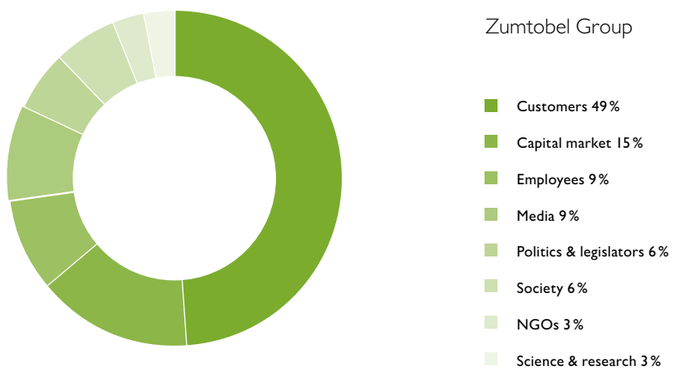
Politics:
The Group's active membership of manufacturer associations, lighting technology groups and standards committees is the basis for a dialogue with politics that has the intention of setting new benchmarks for industry standards in the field of sustainable lighting solutions (see table "Memberships" and chapter on "Sustainable Lighting Solutions"). The Zumtobel Group is also represented in various employers' associations. By way of example, representatives of the German lighting plants chair the employers' association in Lippe as well as its electrical engineering and metalworking committee, and have delegated one board member to the Metalworking and Electrical Engineering Industry association of North-Rhine Westphalia. Another representative is on the advisory council of the Metalworking and Electrical Engineering Industry employers' association in Hesse and Dr. Harald Sommerer is a member of the committee of FEEI – the Association of the Austrian Electrical and Electronics Industries.

Systematic stakeholder consultation

In spring 2009, the Group conducted a telephone survey of 33 stakeholders, the results of which were fed into the sustainability strategy and this Sustainability Report.

One very positive outcome of the survey was that more than 60% of those surveyed were aware of the sustainability initiatives implemented by the Zumtobel Group and its brands, particularly in the fields of product stewardship and in-process environmental protection. On average the interviewees rated the Zumtobel Group as better than its competitors in terms of sustainability. Stakeholders identified product stewardship as the highest priority (particularly energy efficiency and light quality). As well as reporting in the form of a Sustainability Report and on the Zumtobel Group website, stakeholders said that they wanted to be personally involved, through individual consultations and "round table" events.

The Zumtobel Group stakeholder overview*



*The Zumtobel Group "Stakeholder overview" was developed for this survey. Interviewees were selected for their relationship with the Zumtobel Group or its brands and as appropriate representatives of their stakeholder group.

Cool light by day, warm light in the evening: this is the best combination for the natural rhythm of human melatonin production. Selecting the right kind of light improves our performance and concentration.

3. Sustainable lighting solutions

3.1. Introduction

In commercial buildings such as offices and factories as well as for outdoor lighting, an integrated and intelligently controlled lighting solution can make a major contribution to climate protection. Artificial lighting consumes 19% of the electricity generated worldwide, a good two-thirds of which are currently being accounted for by commercial buildings and outdoor lighting. According to CELMA, the European umbrella organisation for manufacturers of luminaires and luminaire accessories, in Europe alone 75% of office lighting is based on inefficient systems.

The Zumtobel Group's brands offer solutions to ensure optimum use of lighting in indoor and outdoor applications. Thorn, Zumtobel and Tridonic use their expertise in the practical application of light and the latest lighting technology to strike a balance between energy efficiency and lighting quality and they work to increase customer awareness of this issue. One important lever for enhancing energy efficiency is the increasing use of modern electronics in artificial lighting. Intelligent control systems, electronic or electronically dimmable ballasts and new, innovative light sources such as LEDs are the most important approaches to boosting energy efficiency.

3.2. Sustainable lighting solutions are our core business

Sustainable lighting solutions are a central pillar of the Zumtobel Group's sustainability strategy (see Chapter 2 "Sustainability strategy"). With its Thorn, Zumtobel and Tridonic brands, the Zumtobel Group is setting new standards for sustainable lighting solutions, making optimum use of its expertise in lighting technology and in the practical application of light. Our customers' exacting requirements set the bar high, challenging us to achieve innovative solutions.

Greatest potential for savings in the use phase

The focus of our commitment to energy efficiency is on reducing energy requirements in the use phase of a luminaire or integrated lighting solution. This is the phase when there is the greatest potential for savings, a recognition backed up by life cycle assessments for lighting systems carried out in-house to ISO 14040 and ISO 14044 (see information box "Life cycle assessments and environmental declaration"; reference to the Chapter 4 "Product stewardship"). The study results were unequivocal: as the service life of a luminaire increases, the use phase comes to account for well over 90% of total life cycle energy requirements (see chart "Potential savings over the life cycle phases of a luminaire").

This is where an integrated lighting solution is capable of achieving the best results. Such a solution is made up of a well-thought-out, professionally planned lighting concept comprising various different luminaires and light sources and controlled by an intelligent lighting management system. There are significant potential savings to be made by combining various measures (see graphic "Savings by individual components of a lighting solution"). These begin as early as the luminaire design stage in terms of improving lighting and thermal characteristics (light distribution, efficiency, heat balance, etc.), by means of factors such as the correct selection of lamp technology and materials and the precise design of reflectors and prismatic diffusers. Another important factor is the use of electronic or electronically dimmable ballasts instead of conventional, far less efficient magnetic ballasts. In addition, intelligent control systems ensure that lighting levels are appropriate to the situation, for instance by means of presence detectors and in line with the level of daylight and time of day.

As part of the planning process, clients can be provided with a simulation of a modern, dynamic lighting concept using a visualisation programme, such as Zumtobel's Vivaldi package (see subsection: "Brand sustainability campaigns"). Vivaldi is capable of simulating lighting quality and energy consumption for several variants of a planned lighting solution.

The best visual, emotional and biological quality of lighting

Sustainable lighting solutions are judged not only by their energy efficiency but also by their lighting quality (see "Lighting quality" information box). Good lighting can promote human well-being, creating, creating the ideal setting for high performance, satisfaction and health. A good lighting solution also guides users and helps ensure their safety (consider road lighting at night or emergency and escape-route lighting during a power outage).

Targeted engagement with trade associations

The Zumtobel Group engages with trade associations, standardisation committees and lighting societies with the aim of establishing the best conditions for optimum energy efficiency and the best lighting quality for the lighting industry and its customers (see "Memberships" in the "Stakeholder dialogue" section). Until he left the company in April 2010, the previous CEO of the Zumtobel Group, Dr. Andreas J. Ludwig, was President of CELMA (the European umbrella organisation for manufacturers of luminaires and luminaire accessories) and chaired the lighting division of the Central Association of the German Electrical and Electronics Industry (ZVEI).

Policy makers have recognised the enormous potential that energy-efficient lighting has for reducing carbon emissions. With its Directives

on the energy efficiency of buildings, products and services, the European Union has created a framework whose gradual transposition into national law is expected to boost demand for energy efficiency services (see "Energy Performance of Buildings Directive" information box and "Energy Services Directive" information box). This is a development welcomed by national and international trade associations, lighting societies and standardisation committees such as CEN and CIE. However, the current requirements of existing EU lighting legislation do not cover all aspects of sustainability, being solely restricted to energy efficiency.

Together with the trade associations, the Zumtobel Group is out to ensure that the EU Directives for energy-efficient lighting are systematised into "Lighting Systems Legislation" (LSL) and is therefore actively involved in CELMA's "LSL Task Force". The aim of the task force is to obtain new EU legislation on sustainable lighting solutions from 2013 which takes both aspects of sustainability into account: energy efficiency and lighting quality. This legislation should promote proper planning, installation, operation and maintenance of lighting systems, further opening up the market for intelligent, sustainable lighting solutions and speeding up the replacement of inefficient systems.

Development of a standard for assessing the effects of light on humans

With the aim of creating a uniform basis for assessing the effects of light on humans, the Zumtobel Group also participated in the development of a corresponding standard. June 2009 saw the proposal, with the German Institute for Standardisation (DIN), of standard DIN V 5031:100, which is now to be transferred to European level by the European Committee for Standardisation (CEN). In addition, the committee is currently also working on a standard for planning guidelines (DIN V 5031:101) that take human biorhythms into account.

The trade associations, including ZVEI, are also raising awareness of the EU Energy Services Directive (see "Energy Services Directive" information box). Since early 2009, ZVEI has been organising regular information events to inform German local authorities about sustainable indoor and outdoor lighting (www.zvei.de/licht).

LIGHTING QUALITY

Making an integrated assessment of lighting quality means taking account of its effects at three different levels: the visual, the emotional and the biological.

The visual level concerns visual requirements which are fully met by the correct lighting quality, enabling error-free working.

Through harmonious variations in light and soft colours, the emotional component creates pleasant surroundings, motivation and a positive mood.

Light becomes biologically effective when calculated changes in the colour and quantity of light support human biological and circadian rhythms.

Potential savings in the life cycle of luminaires

Use accounts for the majority of a luminaire's energy consumption. So this is where the greatest energy savings can be made. The percentages relate to the proportion of total energy consumption over the luminaire's life cycle.

Potential savings by individual components of a lighting solution

Light source	Control gear	Luminaire	Lighting management	Lighting solution
LEDs could reduce energy consumption by 50% in the period to 2025.	Control gear technology is a cornerstone of intelligent lighting management, especially in the shape of dimmable electronic ballasts with an integral control function. 10% potential energy savings.	Optimisation and innovation ensure greater energy efficiency. 10 - 15% energy savings can be achieved by improvements in energy efficiency, without changes to the design.	Good lighting management allows energy savings of up to 80%: • Daylight-dependent control: 40 - 60% • Presence detectors: 15 - 30%	Contemporary lighting concepts achieve energy savings of up to 20%. Project planning: • Consultancy • Visualisation of dynamic lighting scenarios

The greatest potential savings can be made within the lighting solution by using the optimum combination of individual components.

3.3. Brand sustainability campaigns

Brand-specific sustainability campaigns have been developed for the Group's various brands. Their purpose is primarily to foster communication with customers and business partners.

Zumtobel brand: "Humanergy Balance = Human Aspects + Energy Efficiency"

Humanergy Balance was inaugurated in 2006 as Zumtobel's overarching sustainability campaign to take account of both human needs and the environment when planning lighting solutions (see www.zumtobel.com/sustainability). It focuses on striking a balance between apparently conflicting requirements for lighting solutions. The campaign is aimed at cutting energy consumption and thereby reducing the environmental impact. At the same time, it is designed to promote human well-being with regard to lighting quality and safety and security. Regular cooperation with internationally renowned architects, designers and artists as lead users acts as a driver for particularly innovative solutions.

Zumtobel is constantly developing the Humanergy Balance concept. Encouraged and supported by intensive research activities, the brand has made lighting quality measurable for the first time ever, using the "Ergonomic Lighting Indicator" (ELI). ELI covers a total of five aspects of quality: visual performance, vista, visual comfort, vitality and empowerment.

Zumtobel uses a special software package called Vivaldi to simulate lighting solutions at the planning stage in line with the Humanergy Balance mission statement. Vivaldi visualises the composition of the lighting solution for specific usage times and different purposes. In addition, lighting quality can be calculated with ELI and energy usage with LENI (Lighting Energy Numeric Indicator), together with the resultant carbon emissions.

Since the Light+Building 2010 trade fair, a further tool has been available to download from www.zumtobel.com in the form of the free ecoCalc software. The software is used for the comparative calculation of energy and investment costs over the life cycle of a number of different lighting solutions (total cost of ownership). ecoCalc was developed in cooperation with Thorn to provide a clear picture of the positive – and financially measurable – impact of energy efficiency.

Sparkasse Lemgo, DE: 70% savings and zero maintenance costs.

Thorn: "PEC = Performance + Efficiency + Comfort"

Thorn's sustainability promise is to deliver performance, efficiency and comfort – the hallmark of quality lighting. PEC provides the framework for Thorn, working with a comprehensive range of technical equipment, to develop tailored, environmentally compatible lighting concepts matched to the particular requirements of an individual location, user and application (see http://www.thornlighting.com/com/en/aboutus_efficiency_comfort_f.htm). Thorn's products also embody the PEC spirit.

With this programme, Thorn brings together the two quantitatively measurable aspects of performance and energy efficiency and sets them up against the subjective expectations of comfort influenced by lighting psychology. The lighting solutions follow design rules and are based not only on standards and guidelines but also on the creative and artistic experience of the lighting designer. Important aspects of PEC for outdoor lighting include optical light guidance and a holistic lighting concept, so as to avoid light pollution (see "Light pollution" information box in the "Product Stewardship" chapter). Thorn is constantly adding to its in-house expertise (see "Research & Development" section) in order to optimise the balance between energy reduction and lighting pattern in outdoor lighting.

Like Zumtobel, Thorn offers the ecoCalc software mentioned above for life cycle cost calculations.

In 2009, Thorn won the coveted EMILAS (Energy Management and Innovation in Lighting Award Scheme) prize awarded by the British Lighting Industry Federation in the interior lighting category. The prize was awarded for Thorn's interior lighting system for Gateshead Civic Centre's office complex. The prize recognises energy management and innovative lighting solutions. Energy savings of at least 20% have to be achieved relative to previously installed solutions. In Gateshead, Thorn achieved an impressive savings of 68%.

Gateshead Civic Centre,
UK: Cinqueline SR, dimmable ballasts

Tridonic: "It's time for an ecolution"

With its "ecolution" sustainability initiative, Tridonic is not only laying down guidelines for its core business, but is also developing an integrated strategy for all its activities (see www.tridonic.com/com/de/148.asp).

Tridonic ranks among the innovation leaders in electronic and electronically dimmable ballasts. This control gear technology is a cornerstone of intelligent lighting management. In addition, Tridonic has played a crucial part in the development of the DALI (Digital Adressable Lighting Interface) standard for the control of electronic ballasts.

Tridonic's ecolution initiative takes account of the interests of both humans and the environment at all stages in the life cycle of its products.

As ecolution progresses, the initiative will be extended to cover two more aspects: individual products and application solutions will, in future, be increasingly highlighted as examples of best environmental practice by the green "best of ecolution" label (see "Sustainable products" section). The cross-application expertise of Tridonic's sales staff is being extended to cover the use of energy-efficient lighting control, with the assistance of visualisation and simulation programmes.

Modernised street lighting, Rednitzhembach, DE: ZRM A201 ignitor with additional impedance for up-grading to more efficient light sources; Energy saving 77,000 kWh/year (10,000 EUR/year); ROI: 4 years

ENERGY PERFORMANCE OF BUILDINGS DIRECTIVE

What is the Energy Performance of Buildings Directive?
The Energy Performance of Buildings Directive (EPBD) 2002/91/EC has been in force since 2002 and implemented in most EU Member States since 2006. The Directive's aim is to improve the overall energy efficiency of buildings by rating them. Implementation of the Directive makes Energy Performance Certificates obligatory for existing building stock and new buildings.
These certificates must be produced on sale, rental or leasing of buildings that cover an area greater than 1000 square metres.

How does the Directive affect the lighting sector?
The Directive introduces standards for a calculation methodology for lighting – in addition to guidelines for calculating the total energy requirements of heating, air-conditioning, ventilation and hot water systems. Along with individual national calculation methods, European standard EN 15193 specifies the procedure to be adopted. The calculations include the installed luminaires, the type of use and control, and the period of use. As a key indicator, the actual energy demand is determined in kilowatt hours per square metre and year using LENI (Lighting Energy Numeric Indicator).

ENERGY SERVICES DIRECTIVE

What is the Energy Services Directive?
The Energy Services Directive (ESD) 2006/23/EC was issued in 2006. The guidelines are currently being implemented in the framework of national energy efficiency action plans (NEEAPs). The Directive's aim is to reduce energy consumption in every EU Member State by 9% by 2016, relative to the current situation. The objective is to restructure the energy market by increasing the market share of energy-efficient products.

How does the Directive affect the lighting sector?
In its NEEAP, each EU Member State has to give a preview of its planned energy efficiency measures and, wherever possible, set measurable targets and interim targets. Since the lighting sector can make a considerable contribution to energy savings, its expertise, in relation to street lighting and other public lighting, is in particular demand.

3.4. Brand-customer dialogue

Customer dialogue takes top priority for the Zumtobel Group's brands with the aim of promoting customer awareness of sustainable lighting solutions. By means of high-quality, well-targeted communication, the company enables the customer to access its knowledge of sustainable lighting solutions and generates enthusiasm for the innovative "green" strength of its brands. This dialogue makes use of face-to-face meetings, cross-media campaigns and brand training opportunities. Long-term, trusting customer relationships secure the Zumtobel Group's market position and commercial success. To measure customer satisfaction, the Thorn and Zumtobel brands conduct regular customer surveys (see "Product stewardship/ Quality and Safety" p. 63).

Brand communication: linking lighting and sustainability

Several brand campaigns already link the subject of lighting with sustainability. To this end, Thorn, Zumtobel and Tridonic make use of trade fairs, product classifications and e-newsletters. Cross-media communications include the use of microsites to supply detailed information. The brands' overarching sustainability programmes provide the appropriate frameworks. This Sustainability Report will itself contribute to this communication process, which is why "Sustainable lighting solutions" has been presented as a separate topic.

Meeting places and customer training

The three brands offer their customers specific training opportunities to inform them about the effects and use of lighting and the key criteria of sustainable lighting solutions. The teaching programme is based on application-oriented product presentations.

For the Zumtobel brand in particular, this far-reaching, intensive dialogue with and transfer of knowledge to its customers is of vital importance. In its role as a pioneer, the brand communicates new ideas for greater energy efficiency and improved lighting quality in specific applications, in an effort to make these aspects the criteria on which its customers base their purchasing decisions. Worldwide, Zumtobel runs three Light Forums and 15 Light Centres, which attract around 28,000 customers every year. Their architectural structure alone serves as a source of inspiration for customers and employees alike. For around four years now, Zumtobel has also been training selected electricians as lighting solution partners and, to date, 600 people have taken part in this training programme.

Thorn uses its Academy of Light at the new Spennymoor plant to share the knowledge acquired in its daily business and research activities not just with its employees (see "Employees" chapter) but also with its customers. Customers are trained here in sustainable lighting solutions, products and technologies. The target of 2,000 visitors to the Thorn Academy of Light was exceeded in the current financial year, with a total of 2,208 visitors since February 2009. In March and April 2009 alone, the Academy offered 226 seminars, each lasting 1-2 hours, as well as two 3-day courses. In addition, Thorn offers special seminars throughout the world (not least in South-East Asia, China and the Middle East) primarily for architects and lighting consultants, with the topics covered now also including sustainability.

Tridonic also offers regular seminars and training sessions for customers. Around the world, selected customers are invited to events presenting the existing product portfolio and the requirements for sustainable lighting solutions.

500 lux is the recommended standard for office lighting. Zumtobel surpasses this benchmark with innovative lighting concepts that bring daylight and artificial light into perfect balance.

4. Product stewardship

4.1. Introduction

The Zumtobel Group manufactures innovative, high-quality products. To ensure this is the case, the Group invests in research and development activities in respect of new technologies and their application, not least with a view toward enhancing energy efficiency in existing products and new ones, as well as in production operations. LEDs are one of the Group's main innovation priorities. They are the light sources of the future and promise to revolutionise the energy efficiency of luminaires.

Because sustainable product properties play a major part in any lighting solution, in the 2008/09 financial year the Zumtobel Group brands began defining product classifications. The primary purpose of these classifications is to facilitate customer communication and guidance. In addition, a uniform approach to environmental declarations across the entire Group will make it easier for customers to base their purchasing decisions on environmentally relevant indicators. A uniform Group-wide approach to calculating these indicators was developed in the 2009/10 financial year.

The plants have also put management systems and processes in place to guarantee quality and safety during production and in the product itself. This requirement is also being rolled out to the Group's suppliers.

4.2. Sustainable products

Sustainable lighting solutions combine energy efficiency and lighting quality. They are based on professional planning and intelligent control of the individual luminaires. The design of each product should take sufficient account of environmental factors for every lighting solution to be able to develop its full potential. Maximum luminaire efficiency is a central factor here.

Product classification makes sustainability measurable

The brands have recently developed classifications in order to be able to measure the performance of their products in terms of sustainability and ensure continuous improvement. In so doing, the brands have each defined their own criteria, which are distinctly more stringent than the statutory requirements. It makes sense to have different criteria for each brand, because the relevant features of Tridonic products differ from those of Thorn and Zumtobel. Also, as a result of their market position, Thorn and Zumtobel address different market segments (see "Brands of the Zumtobel Group" information box).

"eco+" at Zumtobel – setting a new standard in classification

In 2010, Zumtobel introduced the eco+ label at the Light + Building trade fair (see www.zumtobel.com/eco). The eco+ criteria relating to energy efficiency, environmental relevance and application quality were very strictly defined and apply in each case to an individual product, not to an entire product line. This ensures that the label really is found only on the best products.

The eco+ evaluation process takes place in three stages. First of all, the energy efficiency of the luminaire is assessed in terms of the operational efficiency of the luminaire, light sources and control gear. The luminaire also receives plus and minus points depending on how well it meets specific criteria such as lighting pattern and dimmability. For each luminaire category, a threshold value was defined which must be achieved for the eco+ classification to be awarded. This threshold is well above the required levels and, in this fashion, sets new standards. In the second step, the environmental compatibility of the materials used in the luminaire is evaluated.

For instance, luminaires must have halogen-free wiring and emergency luminaires must be fitted with cadmium-free batteries. Finally, application quality is assessed by testing the luminaire's glare limitation characteristics. Quality-enhancing light distribution is also taken into account.

At the time of introduction of eco+, the Zumtobel brand estimated that eco+ products accounted for approximately 10 – 15% of its portfolio. One of the TOP sustainability goals is to raise the proportion of "eco+ products" to 15% of total revenues by 2010/11.

Panos Infinity

Thorn's "Greenliner" – guaranteed energy efficiency and optical quality

In the UK, Thorn introduced the Greenliner classification for indoor lighting in the 2008/09 financial year. The classification is based on an evaluation of the products' energy efficiency and optical quality. A luminaire's energy efficiency must always be better than required by local standards. For example, in the UK the output of a luminaire must be above the requirements of Part L of the Building Regulations. The optical quality of lighting is assessed in particular on the basis of the atmosphere it creates and the productivity of the working environment. In the 2008/09 financial year, 10% of the portfolio in the UK was classed as Greenliner. Plans for the 2010/11 financial year envisage rolling out the Greenliner label across Europe for the entire indoor and outdoor product range and, on this basis, to define target values for the proportion of total revenues or unit output that Greenliners should account for.

Menlo³ shown at Light + Building.

"best of ecolution" at Tridonic – awarded to particularly eco-friendly products

Especially in Tridonic's field of activity, the labelling of eco-friendly products depends on the environment in which they are used. Tridonic manufactures all its products in line with the most stringent requirements. For example, at the Light + Building 2010 trade fair, Tridonic gave particular prominence to some extremely environmentally friendly products; 16 out of 30 of the products and innovations presented at the fair bore the "best of ecolution" label. Selection was made on the basis of both quantitative and qualitative criteria, in each case taking account of specific features of Tridonic's product categories. These include energy savings, service life and materials usage.

Tridonic: corridorFUNCTION; low standby losses; directly compatible with daylight sensor; EEI = A1 BAT

Increasing revenues from energy-efficient products

Aiming to meet both environmental and customer requirements, the Zumtobel Group brands are working hard to ensure continuous growth in the share of revenues generated by energy-efficient products. The Thorn and Zumtobel brands are thus encouraging the replacement of luminaires with magnetic ballasts through luminaires with electronic or electronically dimmable ballasts.

In 2009, Thorn launched its "Goodbye switchstart, hello high frequency" campaign in the UK, the aim of which is to accelerate the changeover from magnetic to electronic ballasts. In addition to a wide-ranging marketing campaign, Thorn is also introducing sales measures that will make it easier for customers to purchase through distributors. And with the "E-Control" campaign in Northern Europe, in the summer of 2010 Thorn is taking a further step to boost sales of luminaires with electronically dimmable ballasts. Compared to the 2008/09 financial year, Thorn is hoping to see the proportion of revenues accounted for by luminaires with magnetic ballasts drop from 52% to 14% in the 2011/12 financial year. Moreover, effective from April 2010, Thorn is replacing its best-selling PopPack luminaire with magnetic ballast with a more energy-efficient electronic version and an electronically dimmable version.

As part of the "dim2save" campaign encouraging a changeover to luminaires with electronically dimmable ballasts, the Zumtobel brand has set itself a target of increasing the proportion of total unit output accounted for by luminaires with dimmable ballasts to 20% by the 2010/11 financial year.

For its part, the Tridonic brand is targeting a continuous rise in the proportion of revenues accounted for by energy-efficient products. The following products have been designated particularly energy-efficient: electronic ballasts for fluorescent and HID lamps, electronically dimmable ballasts for fluorescent lamps, all LED-based products, electronic transformers, and lighting control equipment. In the reporting year, these products together made up 65.6% of the brand's total revenues. By the 2013/14 financial year, Tridonic is aiming to increase this figure to 80%.

Pioneering work in drawing up a life cycle assessment

Life cycle assessments are the tools that are generally used for systematically investigating products in terms of their environmental impact and potential savings. In the past, these have been drawn up manually by the brands. Their results are documented in environmental declarations (see "Life cycle assessments and environmental declarations" information box). The EU Ecodesign Directive (see "Ecodesign Directive" information box) recommends using standards ISO 14040 and ISO 14044 for guidance. However, no international standard for life cycle assessments specifically for the lighting sector has as yet been established. Working in cooperation with the Institut für Bauen und Umwelt e.V. (IBU), the Zumtobel Group has therefore drawn up specific criteria in the form of "Product Category Rules" (PCR) for lamps, control gear and luminaires. These are now used in conjunction with the ISO 14040 and ISO 14044 standards.

In autumn 2009, a feasibility study was carried out in the Zumtobel Group to examine the options for establishing a uniform approach to environmental declarations across the entire Group. The aim is to make environmental declarations with a certificate available to customers via the online product catalogue on the brands' websites. The Zumtobel and Thorn brands have already started to draw up environmental declarations and, in the next few years, will be progressively extending them to cover all their products.

Entering the LED lamp business

With effect from 1 September 2009, the Ecodesign Directive set threshold values for domestic lamps which led to the prohibition of certain incandescent light bulbs (see "Ecodesign Directive" information box). This does not affect the Zumtobel Group's core business. Against the background of changing lamp technology and high levels of consumer interest in the successor to the incandescent lamp, the Zumtobel Group, which has been working on LED technology since as long ago as 2001, decided to enter the retail consumer business with energy-efficient and innovative LED lamps. This led to Ledon Lamp GmbH being established in 2009. The company presented a comprehensive range of LED lamps at Light + Building and is now developing a sales channel for the lamp business on this basis (see "LED" information box).

LIFE CYCLE ASSESSMENTS AND ENVIRONMENTAL DECLARATIONS

What are life cycle assessments and environmental declarations?
The purpose of life cycle assessments on the basis of the ISO 14040 and ISO 14044 standards is to systematically record a product's environmental impact over its entire life cycle. The life cycle of lamps and luminaires extends from materials procurement via production, transport and use to disposal or recycling. Life cycle assessments include all sourcing from and emissions into the environment. In addition to energy consumption, the analysis also covers water consumption, materials usage, waste and environmental impact, for example. The energy consumption of lighting in the use phase is calculated on the basis of standard scenarios which reflect the typical application of the product, for instance use as office or industrial lighting. All the calculations made in a life cycle assessment are based on Product Category Rules (PCR, see "Research & Development" section). The outcome of a life cycle assessment is documented in environmental product declarations (EPDs) in accordance with the ISO 14025 standard.

What are the advantages of life cycle assessments and environmental declarations?
Life cycle assessments assist in systematically recording the entirety of a product's impact on the environment and in feeding these findings into product development. In this way, effective levers for more sustainable product design can be more readily identified and exploited. At the same time, customers can make use of environmental declarations in order to include environmental criteria in their purchasing decisions.

LIGHT POLLUTION

What is light pollution?
If streets, public buildings, churches and airports are not properly lit, some of the light produced is emitted into the environment directly and indirectly by reflection and scattering. This scattered light results in the formation of "light domes" over conurbations in industrialised countries. These make the night sky ever brighter and this is referred to as light pollution.

What are the consequences of light pollution?
In conjunction with many other causes, light pollution can disrupt the circadian (waking-sleeping) rhythm in humans. The animal world is also affected by light pollution: many insects are killed by street lanterns and night-flying birds are confused by light smog and collide with buildings.

What action is the Zumtobel Group taking in relation to light pollution?
Within the Zumtobel Group, the Thorn brand, as a supplier of outdoor lighting, is affected by the problem of light pollution and is therefore actively seeking solutions. Replacing outdated outdoor lighting – in particular public lighting – with efficient, innovative lighting solutions, can save energy while at the same time reduce light pollution. Thorn is investing in product development, and in light control in particular, in order to identify worthwhile approaches. In 2004, Thorn introduced Champion, the world's first commercial outdoor luminaire to deliberately limit light pollution by a controlled lighting pattern (see "Research & Development"). Since then, reducing light pollution has been a factor in the design of Thorn's new outdoor lighting, as seen in the Areaflood luminaire launched in 2009.

LEDS – THE REVOLUTION IN ARTIFICIAL LIGHTING

What are LEDs?
LEDs (Light Emitting Diodes) are the future of lighting. LEDs are small, very high intensity point light sources with elevated energy efficiency and a long service life. They consist of an electronic semiconductor component which emits light when a current is applied and is controlled by a chip. Organic light-emitting diodes (OLEDs) differ from conventional LEDs by using organic material, as a result of which current density and luminance are lower. OLEDs are wide-area light sources.

What are the advantages of LEDs?
LEDs have many advantages, both over conventional incandescent light bulbs and over low voltage halogen lamps and fluorescent lamps. LEDs are very energy-efficient light sources. To date, progress in LED technology has meant that their light yield has doubled every two years. ZVEI expert evaluations already indicate that using light-emitting diodes worldwide could save up to 30 per cent of the energy that has previously been used for lighting.

What is the Zumtobel Group working on in the LED field?
Current major applications of LEDs at the Zumtobel brand include the presentation of products or works of art (spotlights), office lighting (downlights) as well as facade illumination and emergency lighting. Along with these areas, Thorn also covers the street lighting sector. Tridonic has for some years supplied LED modules for illuminated advertising and refrigerated cabinets and, more recently, also high-performance LED modules for use in professional spotlights and downlights. Ledon has been supplying LED retrofit lamps to consumers since January 2010.

The Zumtobel Group has set itself the target of generating revenues of approximately EUR 100 million with innovative LED-based products by the end of the 2010/11 financial year, twice the level of 2008/09 when LED revenues totalled EUR 50.6 million. The Zumtobel Group's LED business is enjoying dynamic growth, despite the economic crisis, with year-on-year growth rates exceeding 35 %. By 2015, as one of the Group's top sustainability goals, LED products should be accounting for 25 % of Group revenues.

Since 2001, the Zumtobel Group's LED and OLED activities have been combined under the Ledon brand. Ledon supplies not only third parties but also the other Group brands with high-performance LED components and modules and with LED light engines and OLED panels. Converters and control systems for LED and OLED solutions are developed and manufactured in-house by Tridonic.

In comparison with conventional incandescent light bulbs, Ledon's high-tech LED lamp, which has been on sale since January 2010, achieves the same light yield with 85 % less energy (measured on a 5-watt lamp replacing a 25-watt incandescent bulb) and, even in comparison with energy-saving lamps, uses 30 % less energy. Ledon Lamp has also been able to demonstrate its outstanding lighting quality in a comparative colour perception study. It was the overall winner in comparison with conventional commercial energy-saving lamps, conventional incandescent lamps and another LED lamp.

Ledon's high-tech LED lamps were initially offered for sale in five- and six-watt versions, replacing conventional 25- and 40-watt incandescent bulbs. Light + Building 2010 saw a ten-watt version (corresponding to a 60-watt incandescent bulb) and new candle and globe shapes added to the range.

4.3. Research & development

At the Zumtobel Group, innovation drives growth. Consistent application of new technologies, development of new products and continuous process optimisation are the tools the Zumtobel Group uses to attain its outstanding commercial and competitive position. Research & development (R&D) is thus a key component in the Zumtobel Group's strategy and an integral part of corporate culture to the very highest level. R&D is the responsibility of the Executive Vice President (EVP) Group Technology.

R&D expenditures include expenses recognised to the income statement as well as capitalised development costs. In accordance with its goal to also expand the outstanding technology position of the Zumtobel Group in less favourable economic times, expenses for research and development were increased by 9.5 % to EUR 52.1 million in 2009 / 10. Energy efficiency and LEDs remain the primary focal points of R&D activities in the Zumtobel Group. The significance of R&D and the Group's innovation culture is also reflected in the funds spent on these activities, which rose from 4.1 % to 4.7 % of revenues for the reporting year.

Competitive advantages thanks to sustainability in R&D

R&D in the Zumtobel Group makes sustainability a cornerstone of the innovation process. The focus is on innovative, forward-looking products which will make the brands stand out in their various markets. This target was devised in line with the Group's sustainability strategy (see p. 26, "Sustainability strategy"). Brand-specific product classification provides the basis for taking sustainability factors into account in the innovation process (see p. 50, reference to preceding chapter).

In product development, the brands constantly strive to exceed the requirements of technical standards. Zumtobel opened its first lighting laboratory as long ago as 1959 (see "Lighting laboratory" information box) in order to test the photometric properties of its independently and rapidly designed luminaires. Now there are lighting laboratories at almost all of the Group's sites. They are used by both Zumtobel and Thorn.

Application of Lean Six Sigma management methodology demands continuous improvement in corporate procedures (see "Sustainability management" section). Consequently, R&D in the Zumtobel Group is also process-oriented. The Thorn and Zumtobel brands also make use of the Design for Six Sigma "voice of the customer" (VOC) tool. In this way, the two brands derive measurable, critical-to-quality (CTQ) product features for product development from workshops with potential customers and users and employ them as the basis for the development and industrialisation of innovative products.

LEDs and energy efficiency – major research activities in the 2009 / 10 financial year

The steady improvement in the efficiency of LEDs, which in the meantime have surpassed the compact fluorescent lamp for energy efficiency, has led all the Zumtobel Group brands to shift the focus of their product development activities to LED solutions. In the LED sector, R&D activities are still concentrated on the generation of high-quality white light for professional general-purpose lighting applications, but now also include high-performance LED light engines for what are known as LED retrofit lamps (i.e. efficient LED lamps with traditional sockets for replacing conventional and halogen lamps).

Development activities at the Zumtobel brand in the reporting year focused on the new Panos Infinity downlight series that bundles all the advantages of LED technology and is more efficient than standard solutions with compact fluorescent lamps, as well as on the Discus spotlight, which can now be manufactured in a shape and size not possible with conventional lamp technology. Other new arrivals at the Zumtobel brand include the recessed luminaire series Mellow Light V; LED variants for the spotlight series Arcos and Vivo; and the Valuea and Eleea luminaire series based on T5 lamps, which set new standards in terms of ergonomics and efficiency.

The 2009 / 10 financial year also saw the Thorn brand bring out a new version of its classic PopPack lighting strip, complete with a new, unequalled, fast assembly technique. Other focus areas in indoor lighting included the new flat luminaire Menlo³, also offered as an LED option; the Equline system luminaire; and new LED models of the proven Quattro, Planor and Cruz series. In the outdoor lighting sector, Styled represents the first LED streetlight to meet all the requirements of official standards, with sophisticated technology that also makes it suitable for wider streets. Atla, by contrast, provides efficient, high-quality white light for illuminating narrower roads and side streets. The proven Oracle range was extended to include a more compact size for modern high-pressure lamps, while a version based on a high-performance LED module was added to the Dyana series.

In all, the Thorn and Zumtobel brands applied for 73 new patents in the 2009 / 10 financial year.

R&D activities at Tridonic continued to focus on energy-efficient and environmentally compatible lighting technology. With xitec, a processor technology developed by Tridonic, the brand can develop future-oriented, intelligent control gear with high functionality and energy efficiency. Tridonic has now based its entire portfolio of electronic control gear for fluorescent lamps, high-pressure discharge lamps and emergency lighting units on xitec processor technology. At the same time, by means of optimum thermal management, the brand has been able to cut energy losses in non-dimmable ballasts as well.

TALEXX LED products from Tridonic guarantee top quality with respect to luminosity, homogeneity and consistent colour reproduction. The broad-based and extensive TALEXXconverter range of LED control gear for indoor and outdoor applications was enlarged during the reporting year to include a whole new product family.

Tridonic applied for a total of 67 new patents (2008/09: 60) during the past financial year.

Close cooperation with universities and research organisations

In addition to its independent R&D activities, the Zumtobel Group works closely together with universities and research institutions to promote sustainable innovation processes.

In 2003, the Zumtobel Group co-founded Kompetenzzentrum Licht (K-Licht), a centre of lighting expertise in Innsbruck, Austria, in which it has since played an active part. The centre's 31 projects complement each other in subject matter, build upon one another in terms of content or temporally and extend from basic industrial research up to demonstration projects. The research results are applied in tunnel installations, in urban spaces, in building services technology, in the use of daylight and in the use of LEDs for general-purpose lighting.

Further research priorities are LEDs and the effect of light on humans. For example, from 2007 to 2009, the Zumtobel brand participated in a joint study with K-Licht and other partners in a nursing home for dementia patients. Over 15 months, various dynamic lighting scenarios were investigated in the course of the day. The outcome was that high levels of light can improve the circadian rhythms of elderly people. This is particularly the case for people in need of care who have no regular access to natural daylight.

In addition to its ongoing internal activities relating to LEDs, the Zumtobel Group is also investing in OLEDs, the LED technology of the future (see "LED" information box). To this end, in autumn 2009, the Group founded the joint venture "Ledon OLED Lighting GmbH & Co. KG" together with Fraunhofer-Gesellschaft and members of staff from the Fraunhofer Institute for Photonic Microsystems (IPMS) in Dresden.

The Group is also participating in the GBP 3.3 million "Thin Organic Polymeric Light Emitting Semi-conducting Surfaces" (TOPLESS) project involving Thorn Lighting UK, Sumation UK and Durham University. The first prototypes of this next generation of lighting were presented during the 2008/09 financial year. These small prototypes were tested at the new Printable Electronics Technology Centre (PETeC) in Sedgefield, UK. The products are expected to reach market maturity in around nine years.

The EU-funded "SmartCoDe" project involves the development of an IT-controlled energy management system which is primarily intended to reduce energy consumption in smaller buildings and neighbourhoods. The intention is to develop carbon-neutral local power grids. The project started in January 2010 in the "ICT support to energy-positive buildings and neighbourhoods" topic of the ICT-2009 programme and is planned to last three years. Tridonic is contributing its expertise in the area of lighting and building automation.

Active participation in standardisation

The company contributes its know-how in the application of lighting to the development and verification of standards (see "Sustainable lighting solution" section). For instance, since 2005 it has been jointly developing the Ergonomic Lighting Indicator (ELI) with the lighting technology department of Ilmenau University of Technology.

Over the period from 2004 to 2008, a joint study with the Fraunhofer Institute for Building Physics (IBP) was carried out to compare measured energy consumption with the energy consumption calculated to DIN V 18599. The findings are used in calculating energy requirements, not least for lighting under the Energy Performance of Buildings Directive (see "Energy Performance of Buildings Directive" information box, Chapter 3).

The Zumtobel Group is also committed to the "Zhaga" initiative to create standard specifications for LED module interfaces. The aim is to define the physical, photometric, electrical and thermal behaviour of LED modules and in this fashion to create industry-wide standards and help LEDs to break through on a large scale. The founding meeting took place in March 2010. Together with seven other companies from the lighting industry, the Zumtobel Group is a founding member.

ECODESIGN DIRECTIVE

What is the Ecodesign Directive?
EU Directive 2005/32/EC setting ecodesign requirements for energy-using products, or EuP Directive (EuP = Energy-using Products) was issued in 2005. Further categories of product, which do not themselves use energy but have an influence on consumption (ErP = Energy-related Products 2009/125/EC) were added in November 2009.

The aim of the Ecodesign Directive is to ensure that greater account is taken of environmental properties in the development and design of energy-operated and energy-using products. The primary focus is on energy efficiency. Such information is generally recorded by life cycle assessments and documented in environmental declarations (see "Life cycle assessments and environmental declarations" information box).

How does the Ecodesign Directive affect the lighting sector?
The European Commission issued two implementing regulations in 2009: 244/2009 for household lamps and 245/2009 for fluorescent lamps and high-pressure discharge lamps for office and street lighting.

Their purpose is to improve energy efficiency in the private sphere and in commercial lighting, for example in offices, on the streets and in industrial plants. Inefficient lamps, such as incandescent lamps by 2012, or standard fluorescent lamps, mercury vapour lamps and magnetic ballasts are accordingly being withdrawn from the market in a phased plan. Stand-by losses must be less than one watt. This threshold will be reduced to 0.5 watt in 2013.

Compliance with requirements must be demonstrated by the CE mark (see "Statutory and voluntary marking" information box).

LIGHTING LABORATORIES

What are lighting laboratories?
During product development, a performance specification is defined which sets out the photometric and electrical properties (in lux, lumen, candela, kelvin, etc.) which a luminaire has or should achieve in service. The results and progress made during development are measured and verified in accredited lighting laboratories. This applies both to standard luminaires and to customised project and special-purpose luminaires.

Why do we use lighting laboratories?
A lighting laboratory is used, on the one hand, during luminaire development and, on the other hand, to document photometric data for customers. Development processes can be accelerated if R&D has access to in-house laboratory facilities. Once luminaire development is complete, the product is tested once more in the laboratory to check that all the criteria of the performance specification have been met.

4.4. Quality and safety

The Zumtobel Group guarantees that its products are of high quality. This is ensured by well-organised, highly efficient working procedures and by thorough material and product inspection. The Zumtobel Group ensures the highest possible quality at all stages of the product life cycle.

Certified quality of all processes

Verification of manufacturing processes and ongoing monitoring ensure stable processing quality throughout the manufacturing process. So in addition to absolute customer focus, the quality management system concentrates on the continuous improvement of maximally defect-free processes using the Lean Six Sigma approach (see "Sustainability management" section and "Lean Six Sigma" information box). In the Six Sigma method, excellent process quality is equivalent to 3.4 errors per million possible cases. In order to maintain and communicate this high standard, all of the Zumtobel Group's worldwide production sites, with the exception of two small plants in the USA, are certified to the ISO 9001 international standard for quality management systems. The first certification was obtained back in 1987 by the Dornbirn component plant, followed by the Dornbirn luminaire plant in 1991. A plant is only certified if it can demonstrate that it is continuously improving all processes in such a way that not only customer expectations but also local and statutory requirements are constantly met.

At Tridonic, the risks involved in product manufacture and design are additionally analysed and the results used as the basis for measures at all the relevant plants. The method used is Failure Mode and Effects Analysis. At Tridonic, the Total Quality Management approach will in future provide an overarching framework for quality management and the Lean Six Sigma approach.

Quality-assured products

In order to guarantee the highest possible product quality and safety, the materials used are selected according to strict criteria (see "Materials usage" section) and subjected to thorough product testing. In the course of production, products undergo constant inspection to ensure optimum quality. After each manufacturing step, quality is checked at "quality gates", for example in terms of function, dimensions and completeness. All products (100%) are subjected to – in most cases – automated safety and functional testing. A more detailed product audit is also carried out on a random sampling basis.

Guaranteed compliance with all regulations

The product quality of all the Zumtobel Group's brands guarantees that all statutory standards and regulations are met or, in some cases, exceeded. This applies in particular to lighting quality and energy efficiency and to mandatory marking requirements. Statutory regulations include CE marking (see "Statutory and voluntary product marking"

information box), REACh (see "REACh" information box), RoHS (see "RoHS" information box) and WEEE (see "WEEE" information box). Thorn and Zumtobel also take indoor lighting standards into account in developing their products. These include EN 12464 (Lighting of workplaces: indoor and outdoor workplaces), EN 12193 (Sports lighting) and EN 1838 (emergency/safety lighting). The outdoor lighting standard EN 13201 also applies to Thorn. Consumption values for lighting systems are based on the Energy Performance of Buildings Directive (EPBD, see "Sustainable lighting solution" section).

Many products are voluntarily included in the ENEC Mark scheme (see "ENEC" information box). The Thorn and Zumtobel brands are in a position to mark more than 90% of their products, especially their standard products. The same applies to around 90% of Tridonic's lighting components and electronic control gear. Special-purpose products are not marked. Since ENEC does not cover light sources, LEDs cannot be included.

Zumtobel brand's voluntary 5-year warranty

In order to provide its customers with the reassurance they expect when buying new technologies, with effect from 1 April 2010, the Zumtobel brand is voluntarily extending the two-year warranty required by EU legislation by a further three years for the entire lighting system including ballasts or control gear. Only wear parts such as conventional light sources or emergency lighting batteries are excluded. The LEDs in LED luminaires are also included in the warranty.

Promoting quality in the supply chain

The Zumtobel Group is renowned as a supplier of quality products. It expects the same from its own suppliers. Selecting new suppliers involves the supplier going through a process in which their performance is systematically assessed by questionnaires and audits. Professional communication and cooperation with suppliers allows both parties to identify and eliminate possible risks in good time (see "Suppliers" chapter).

Complaints are an opportunity, customer satisfaction is the goal

A product's quality is defined by the customer's requirements. Complaints are accordingly seen as an opportunity to further enhance product quality. This is achieved by analysing the reason for the complaint and, where relevant, implementing corrective and preventive measures on the product or process in addition to immediate action, with the aim of avoiding future defects.

Surveys also help to measure customer brand satisfaction. Thorn and Zumtobel regularly carry out surveys of architects, dealers, electricians and lighting designers across Europe. On average, between 1,000 and 1,500 customers are contacted annually and questioned by telephone or online about the products' strengths and weaknesses and also about issues such as energy efficiency. In the most recent survey, the Zumtobel brand scored particularly well in terms of product quality. Thorn excels in its price/performance ratio. The brands use the feedback from the survey to step up the pace of improvements.

Reliable take-back system

Another feature of a quality product is that it is as simple as possible to dispose of. On the one hand, this is already taken into account during product development: on recycling the products should be easy to dismantle and, if possible, contain no hazardous substances. On the other hand, the Group is obliged to maintain collection points to which customers can return their WEEE-marked products (see "Statutory and voluntary product marking" information box). Instead of setting up its own collection points, the Zumtobel Group relies on external organisations which charge appropriate fees for the service.

STATUTORY AND VOLUNTARY PRODUCT MARKING

CE mark
The CE mark (Conformité Européenne, indicating compliance with EU Directives) is an administrative mark of the European Commission introduced in 1993 by Directive 93/68/EEC.

EU Directives specify numerous safety and health requirements to ensure consumer protection for the widest variety of products. The CE marking indicates that the product conforms to the relevant requirements. These also include appropriate evaluation methods such as hazard analysis, risk assessment and verification of compliance with standards.

The CE mark is a mandatory mark. The manufacturer or importer must declare its own products so that the inspection authorities can establish whether all the standards and regulations applicable to a product have been complied with.

ENEC mark
"European Norms Electrical Certification" (ENEC) is a voluntary test mark which was introduced in 1993 and most recently updated in 2008. At the initiative of European manufacturers' associations, the European testing and certification bodies have agreed to assess EU safety requirements on electrical engineering products on a uniform basis.

An ENEC certificate is granted if the product complies with the applicable European standards. Manufacturing must also be governed by a quality management system (e.g. based on DIN EN ISO 9001). The manufacturer or importer must have its products tested by an external body (authorised test centre) and their conformity with the applicable standards and regulations confirmed. These tests must be regularly repeated.

WEEE mark for waste electrical and electronic equipment
Directive 2002/96/EC on waste electrical and electronic equipment (WEEE) has been in force since 2003 and was to be transposed into national law by mid 2005.

Using avoidance and reduction methods, the aim of the WEEE Directive is to ensure environmentally compatible disposal of increasing quantities of electronic scrap by extending the manufacturer's responsibility. Every manufacturer is registered and is responsible for taking back and recycling its electrical and electronic equipment. It must be possible for every customer to have their electronic scrap from their private household disposed of free of charge.

Both in Germany and Austria, the law was framed such that customers are able to return waste appliances to municipal collection points. The manufacturers pay an appropriate fee. However, the manufacturers also have the option of offering their own collection system.

Light helps us find our way and keeps us safe. Light guides us on our journeys and comes to the rescue in an emergency.

5. In-process environmental protection

5.1. Introduction

Eco-friendly products and resource-efficient production

For the Zumtobel Group, protecting the environment is a key consideration as we develop innovative and energy-efficient products and strive to ensure that our production operations are eco-friendly and make efficient use of natural resources.

In-process environmental protection forms an integral part of our sustainability strategy and of the Code of Conduct for Zumtobel Group employees (see "Sustainability standards" section). The importance the company assigns to protecting the environment is also clearly reflected in the environment, health and safety guidelines and the quality policy of the Lighting Segment, as well as in the corporate policies of the Components Segment.

One key lever in terms of in-process environmental protection is process optimisation along the entire value chain. At all Zumtobel Group plants production procedures are geared to the efficient use of resources and subject to continuous improvement in line with Lean Six Sigma methodology (see "Lean Six Sigma" in chapter 2 "Sustainability management"). The focus here is on the efficient use of materials and energy, avoiding and reducing emissions and waste, and employing environmentally compatible packaging concepts.

5.2. Environmental management

Environmental management at the Zumtobel Group is based on two main pillars: certified environmental management systems in line with the ISO 14001 standard (see "ISO 14001" information box) and the application of Lean Six Sigma methods.

Certification of an environmental management system to ISO 14001 calls for, in particular, the systematic and continuous improvement of the company's environmental performance. The Lean Six Sigma management philosophy supports measures in all processes, thereby also benefitting in-process environmental protection (see information box in chapter "Sustainability in the Zumtobel Group"). Environmental management systems enable those responsible on site to respond correctly to local regulations and provisions and thereby optimise the local procurement, production and sales processes, enabling more efficient use to be made of resources.

Environmental management: global guidelines, local implementation

The Group's lighting and components plants are committed to enforcing strict environment, health and safety guidelines in the production sector which often go far beyond the relevant legal requirements. The overarching framework is provided by a quality policy and environmental, health and safety guidelines in the Lighting Segment and by corporate policies in the Components Segment (see "Quality and safety" section).

Environmental management systems govern processes for the avoidance and reduction of energy consumption, emissions, waste and water consumption. They also coordinate the use of materials, recycling and the discharge of wastewater. The various plants apply the management systems with different areas of emphasis.

The field of environmental management is represented by a single coordination office in each case for the European operations of the Lighting Segment and for the global operations of the Components Segment. The coordination offices are responsible for issuing guidelines and prescribing structures for continuous improvement in the shape of environment, health and safety programmes. To ensure that due account is taken of local requirements of the various processes, responsibility for the local organisation of the environmental management systems lies with the plants.

In the Components Segment, a distinction is made between the electronic and magnetic plants.

Commended and certified environmental management systems

As one of its top sustainability goals (see "Sustainability in the Zumtobel Group" p. 31) the Zumtobel Group is targeting the gradual certification of the environmental management systems at all its lighting and electronics plants worldwide in line with the ISO 14001 standard. All the electronics plants and the European lighting plants are due to be certified by the 2010/11 financial year. Certification of the lighting plants outside Europe is then scheduled to follow by 2015.

The initial certification of a lighting plant to ISO 14001 took place back in 1997 in Landskrona (Sweden). By the end of the 2009/10 financial year, four other plants in the Lighting Segment had followed suit. Certification of the plant in Les Andelys is planned for the 2010/11 financial year.

The Components Segment had its main plant in Dornbirn certified to ISO 14001 in 2004. As the first plant in the Group to do so, in the 2008/09 financial year this plant was also certified in line with the occupational health and safety management specification OHSAS 18001. The Innsbruck plant was similarly certified early in 2010. In addition, the plants in Innsbruck, Jennersdorf and Shenzhen have also been certified to ISO 14001. Certification of the Ennenda plant in Switzerland, Tridonic Controls & Systems in Dornbirn, Austria and the Spennymoor plant in the UK is scheduled for the 2010/11 financial year (see the overview of plants certified to ISO 14001 in the "Facts & figures" chapter, p. 113).

The Zumtobel Group also squares up to its responsibility towards people and the environment where its supply chain is concerned. The Components Segment requests information from all its key suppliers regarding compliance with the Zumtobel Group's Code of Conduct and observance of international quality and environmental standards. Since the beginning of 2010, the Lighting Segment has been assessing compliance with quality and environmental standards in line with ISO 9001 and ISO 14001 for all new suppliers of production material and merchandise (see "Supplier management" chapter).

As early as 1996, the main Dornbirn plants of both segments were accredited under the "Ökoprofit" environmental performance scheme operated by the government of the State of Vorarlberg (Austria). In 2010, both plants were accredited for the 14th time in succession. "Ökoprofit" is a practice-oriented programme for integrated and preventive environmental protection. Initial accreditation involves the successful completion of a basic programme, followed in subsequent years by supplementary programmes (for further information visit www.cpc.at/oeko/oe_Waslst.htm).

ENVIRONMENTAL MANAGEMENT IN LINE WITH ISO 14001

What does ISO 14001 cover?
The international ISO 14001 standard provides recognised requirements for an environmental management system. Its primary goal is to promote the protection of the environment and prevent environmental impacts while respecting socio-economic requirements.

What is the main focus of ISO 14001?
The main focus of ISO 14001 is on the continuous improvement of all environmentally relevant procedures and processes. These concern the assessment and ongoing enhancement of the environmental management system and thus also the improvement of the company's environmental performance and the use of processes, methods, materials or products to avoid, reduce or control environmental impacts. The continuous improvement process is based on a Plan-Do-Check-Act cycle and aligned in each case with the predefined goal related to the environmental performance of the organisation.

What are the benefits of applying ISO 14001?
An environmental management system in line with ISO 14001 provides a clear definition of responsibilities. The documentation of the process structure makes for clarity and lays the foundation for effectiveness and efficiency. The evaluation of risks posed by environmentally relevant processes can help identify potential incidents and other environmental problems and prevent them from occurring.

The certification process also inspects the system designed to ensure that external regulations are complied with, and this provides greater legal security.

5.3. Use of materials

The Zumtobel Group uses high-quality materials. Material consumption is reduced wherever possible with a view to resource conservation in the production process. Maintaining the highest standards of quality in all processes helps avoid rejects (see "Lean Six Sigma" and "Quality management"). We continually strive to identify potentials for material savings in the production sector and to optimise our packaging.

Resource efficiency in respect of materials

The main materials used in the manufacture of our products and their packaging include:

In the Lighting Segment:
- Raw materials: aluminium, steel, plastic granules, paints / varnishes
- Consumables: oils, lubricants, detergents
- Semifinished products or parts: electronic components, light sources
- Packaging material (approx. 70% recycled): plastic film, cardboard, wooden pallets, polystyrene

In the Components Segment:
- Raw materials: steel, copper wire, electronic components, insulating material, magnetic sheet steel, housing parts in steel and plastic
- Consumables: solder, flux, varnishes, oils, lubricants, detergents, potting compound (resins), solvents
- Packaging material: plastic film, cardboard, foam

All materials employed are selected in line with stringent quality criteria. In a standardised process, new materials are subjected to inspection with regard to factors such as customer requirements, the requirements of the production process and regulated substances. The aim is to avoid production waste and keep material consumption as low as possible.

Additional savings potential is also exploited at the production plants by employing environmentally compatible product packaging, transport packaging and repackaging systems (e.g. space-saving reels). One important criterion here is downstream efficiency during recycling by the customer. Individual product packaging is therefore designed whenever possible as one-way packaging in cardboard comprising 98% waste paper, or as returnable or reusable packaging. Transport packaging made of polystyrene is replaced wherever possible by bubble wrap or cardboard matting, which also contains a high level of recycled material.

Correct handling of hazardous substances

Another important aspect of in-process environmental protection is the correct handling of hazardous and other critical substances.

The Zumtobel Group rigorously ensures that bans or restrictions on the use of substances in line with the RoHS Directive, REACh or other legal regulations are respected (see "Regulations governing the use of materials" information box). By way of minimum requirements for products, standard procedures

include running through a checklist of potential environmental aspects at the product concept stage and completing a hazardous substances safety data sheet. Only those products are released that definitely include no prohibited materials or only within the permissible limits, or for the use of which a statutory exemption applies. An in-house inspection procedure ensures that all environmentally relevant requirements are met.

Replace harmful materials wherever possible

Within the framework of the legal provisions, harmful or controversial materials are also used. These include mercury, cadmium, PVC and tool cleansers. In each case, observance with the legal thresholds is ensured. The constant goal is to minimise the use of legally permissible but nevertheless hazardous content (and/or emissions) and/or replace these with harmless alternative materials.

Minimal amounts of mercury are found in fluorescent tubes. These are being replaced to an increasing extent by LEDs. Batteries for minimal lighting in the escape route and emergency lighting manufactured by the Lighting Segment formerly contained the pollutant nickel cadmium. Today, in line with the Battery Directive (see regulations governing the use of materials" information box) only nickel-metal hydride batteries are used in escape route lighting. By 2011/12, in line with the Directive, this alternative will also have been fully implemented in the emergency lighting sector as well.

The manufacture of PVC and plastic granulate involves the use of hydrogen cyanide and vinyl chloride. When plastics catch fire, they can release toxic substances such as halogens and hydrogen chloride. This is why, for the wiring of its luminaires, the Lighting Segment is replacing cables that contain PVC with cables that contain no PVC, although there is no legal obligation to do so. PVC-free cables contain no halogens and, in the event of fire, release hardly any toxic fumes. Conversion measures are scheduled for completion by the 2011/12 financial year.

REGULATIONS GOVERNING THE USE OF MATERIALS

Restriction of Hazardous Substances Directive (RoHS)
EU Directive 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment, or RoHS for short, was published on 27 January 2003 and passed into law across the EU in July 2006.

The aim is to ban the use of toxic and polluting substances and components in electrical and electronic equipment and to accelerate the introduction of alternative products. To this end, certain threshold values for materials contained in products were laid down, such as:
- Cadmium: max. 0.01 per cent by weight
- Lead, mercury, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE): max. 0.1 per cent by weight for each

One exception given in the Directive is for the use of mercury in compact fluorescent lamps, where up to 5 mg per lamp is permissible.

EU Regulation on Chemicals (REACh)
EC Regulation No. 1907/2006, also known as REACh (Registration, Evaluation, Authorisation and Restriction of Chemicals) is the European legislation governing the use of chemicals. It came into force across the EU on 1 June 2007. REACh covers all chemical substances, regardless of whether or not they have harmful properties.

All chemical substances of which more than one metric ton per year and manufacturer or importer are produced or imported must be registered and evaluated. Every manufacturer or importer who wishes to place such substances on the market must, since 1 December 2008, have their own registration number for all such substances. Before then an interim ruling was in place.

One special feature of REACh is that it also governs the exchange of information along the supply chain. Not only must suppliers provide information about each substance to their customers; the customers must also provide their suppliers with the information they require for registration purposes (above all regarding the intended uses).

Directive on the take-back and recycling/disposal of waste batteries and accumulator

Directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators and waste batteries and accumulators passed into law across the EU in 2008.

This Directive established rules prohibiting the placing on the market of certain batteries and accumulators in which the mercury content (0.0005 per cent by weight) or cadmium content (0.002 per cent by weight) exceeds a specific limit value. The Directive also aims to promote a high collection and recycling quota for waste batteries and better environmental performance during all phases of the life cycle of batteries and accumulators, all the way to recycling.

5.4. Reducing energy consumption

While energy is a key topic for our customers and the market as a whole, basically it must be said that the lighting sector is not actually an energy-intensive branch of industry, because relatively little energy goes into the manufacture of luminaires and components, compared to other industries.

Reducing energy consumption – a top sustainability goal

That said, in order to access savings potential here too, one of the areas on which environmental management at the Zumtobel Group plants is focused is the continuous reduction of the amount of energy consumed in our production operations. Cutting energy consumption per unit manufactured is one of the Zumtobel Group's top sustainability goals. For the 2010/11 financial year, both segments have set themselves the goal of defining an appropriate system of key indicators and target values. Current carbon emissions per unit manufactured are as follows:

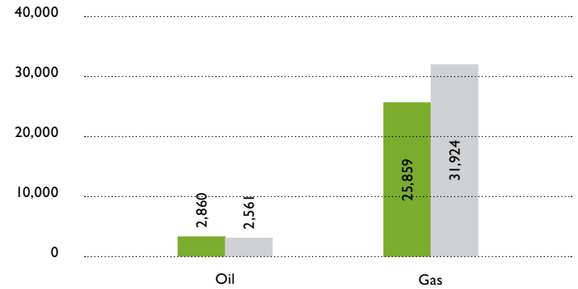
Few energy-intensive processes

The few energy-intensive processes at the Components Segment's electronics plants include thermal processes such as soldering and the hardening of adhesives, as well as the production of compressed air. At the Components Segment's magnetic plants, the most energy-intensive processes include the impregnation process, the curing of resins, production of compressed air and punching operations.

At all the Group's lighting plants, the plastic injection moulding process is particularly energy intensive and at the Lemgo plant there is also the aluminium die-casting process, where energy is required at the heating and cooling stages. These processes are largely gas-fired. Replacement of older machines is considered at regular intervals, since the introduction of new machinery can help achieve a more energy-efficient process and higher output.

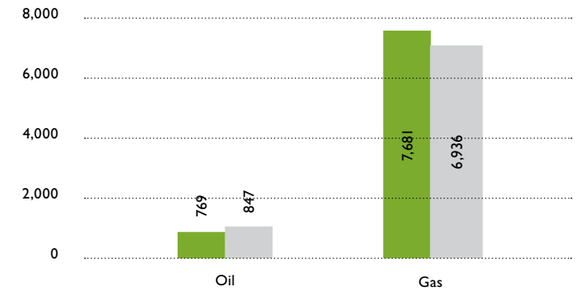
* After the move into the new manufacturing and administration building in Spennymoor, the gas consumption was significantly reduced.

Direct energy consumption by primary energy source in MWh*



Lighting Segment (Europe)

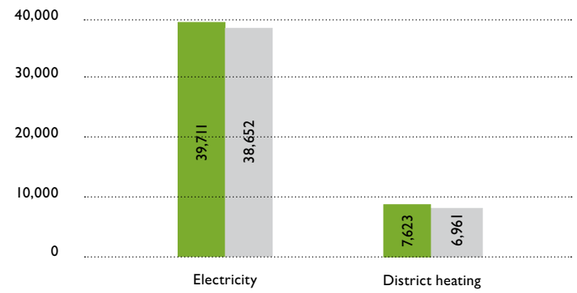
FY 2009/10
FY 2008/09



Components Segment (world)

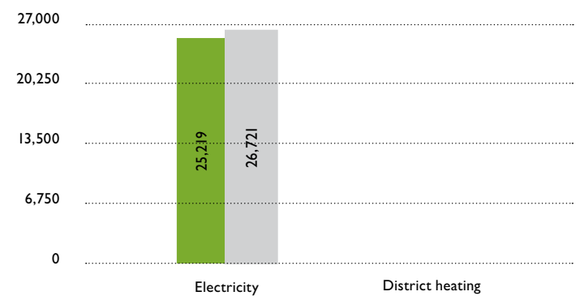
FY 2009/10
FY 2008/09

Indirect energy consumption by primary energy source in MWh



Lighting Segment (Europe)

FY 2009/10
FY 2008/09



Components Segment (world)

FY 2009/10
FY 2008/09

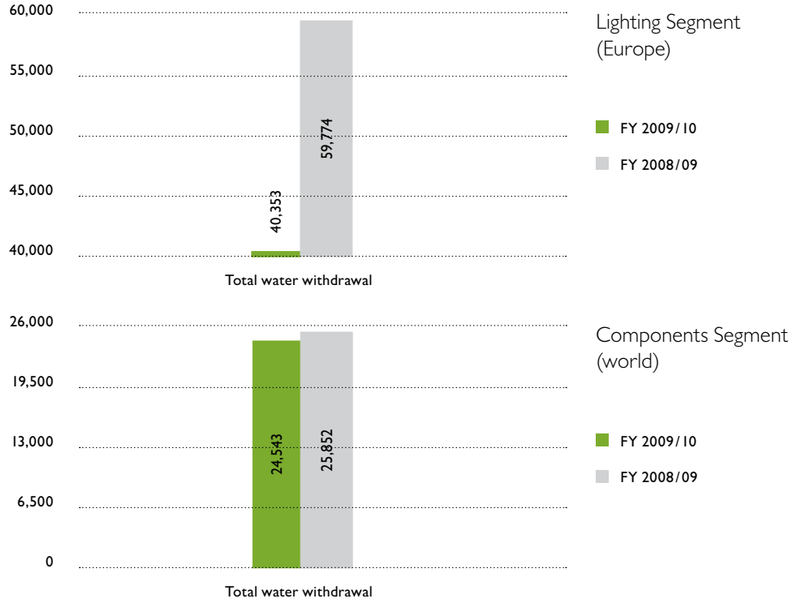
5.5. Water consumption in the production sector

Water consumption is also relatively low on account of the technologies applied. No process water at all is required, for example, in electronics manufacturing in the Components Segment.

Low use of detergents and low water consumption

At the lighting plants, by contrast, water is used in the degreasing baths where the grease is removed from product parts, although this process is being continuously improved. The basic rule here is that as little grease as possible is applied to the parts, which are then kept as clean as possible throughout the production process. This helps reduce both the volume of chemical detergents and the amount of water required. One key development here was the conversion of the painting process at the Dornbirn plant to powder coating in 2007 (see "Conversion to powder coating" information box). In addition to saving substantial amounts of water, this also led to a marked drop in airborne emissions. Environmentally compatible paint booths have also been installed at other plants as well, including powder coating equipment in Spennymoor and Les Andelys.

Total water withdrawal in m^3



5.6. Reducing emissions

One of the priorities of in-process environmental protection measures at the production plants is the reduction of emissions. Environmentally relevant emissions include, above all, carbon dioxide (CO_2), dust, noise and effluent discharge.

The standards observed at the plants are in line with or exceed the relevant EU Directives. In part, they are based on plant-specific dust and/or noise thresholds laid down to protect neighbouring residents and also serve to safeguard the future of production operations at the various locations. Furthermore, measures taken to reduce material and energy requirements generally automatically lead to reductions in carbon emissions from the production process (see "Material and energy" section).

Reducing noise and airborne emissions

Specific measures for the reduction of noise and airborne emissions are drawn up and implemented for each plant separately. Successful projects that can also be applied to production processes at the other plants are passed on accordingly.

At the Components Segment's plants, the focus is on reducing pollutant emissions, and emissions of fine dust in particular. At many plants, water-based consumables and extractor systems with special filters are used to reduce the fine dust content in the ambient air. In the Lighting Segment, dust emissions are minimal, particularly since conversion to state-of-the-art, powder-coating equipment.

REDUCTION OF SOLDER WASTE AT THE COMPONENTS SEGMENT'S ELECTRONICS PLANTS

In the course of a Lean Six Sigma project conducted in the 2008/09 financial year, a process was developed to reduce the volume of solder waste from production operations at the Components Segment plant in Dornbirn. Following the successful launch of this process in September 2009, it was also rolled out at the other electronics plants in the Components Segment in Austria, Switzerland, the UK and China.

A monitoring system was introduced to ensure the sustainability of the solder bath maintenance process. The system monitors the solder input and the volume of dross to enable timely identification and remediation of any errors in the process. In addition, the Dornbirn plant also acquired a cleaning system that enables the solder in the dross that is skimmed off to be separated out as effectively as possible. As a result, the volume of residual dross at the components plant in Dornbirn was reduced by 5,180 kg compared to the previous year, which equates to a drop of 29%.

The use of solvents leads to emissions of low volumes of volatile organic compounds. Emissions of ozone-depleting substances from the operation of refrigeration equipment are virtually negligible. All refrigeration equipment is regularly maintained and inspected to ensure that no refrigerants can leak out. The heating of the production shops leads to generation of combustion gases at all of the Group's plants.

Production noise is controlled in line with local regulations. Neighbours are requested to report any disturbances so that these can be eliminated in future or at least reduced. One substantial improvement was brought about by the introduction of new baling presses in the waste storage areas at several plants in both segments. Discarded boxes can now be compacted at any time without creating noise that could disturb neighbouring residents. A further advantage of the new equipment is that the pressed cardboard bales can be sold without further processing. In addition, the number of truck runs required to transport the bales has been reducedsignificantly (see "Efficient transport logistics").

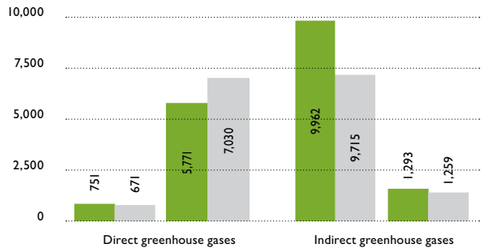
Effluent discharge: four-stage water treatment process

The painting process at the lighting plants leads to emissions of solvents and chemical detergents into the process water. The water is treated in four stages: first it is brought to a neutral ph level; then the paint particles are filtered out; the filter residue is pressed into filter cakes which are passed on to local disposal operators; and finally the water is carefully inspected and returned to the loop.

5.7. Waste and recycling

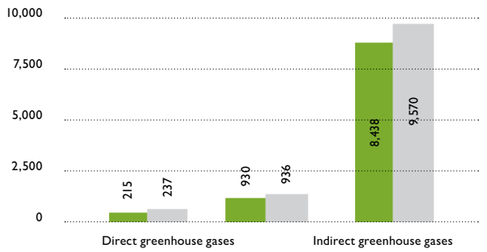
Through the ongoing avoidance, reduction, systematic segregation and optimum recycling of waste, the Zumtobel Group pursues a rigorous approach to resource conservation. The individual processes are optimised for each plant. The aim is to ensure maximum efficiency in use of material and production process design, and to focus on avoiding waste as early as the process planning stage. When waste is generated despite these measures it should be recycled in the best possible way.

Total direct and indirect greenhouse gas emissions by weight (in tonnes of carbon)



Lighting Segment (Europe)

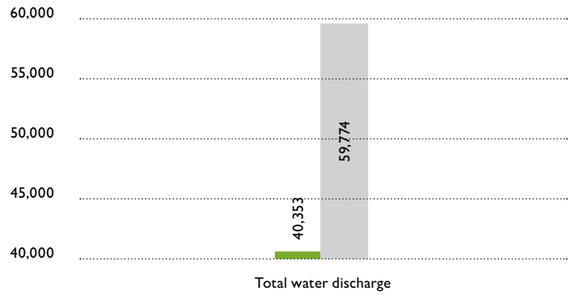
FY 2009/10
FY 2008/09



Components Segment (world)

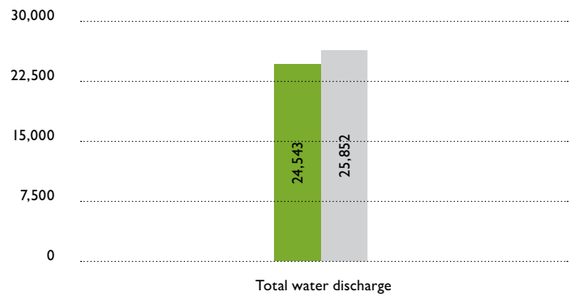
FY 2009/10
FY 2008/09

Total water discharge in m³



Lighting Segment (Europe)

FY 2009/10
FY 2008/09



Components Segment (world)

FY 2009/10
FY 2008/09

Avoidance, systematic segregation and optimum recycling of waste

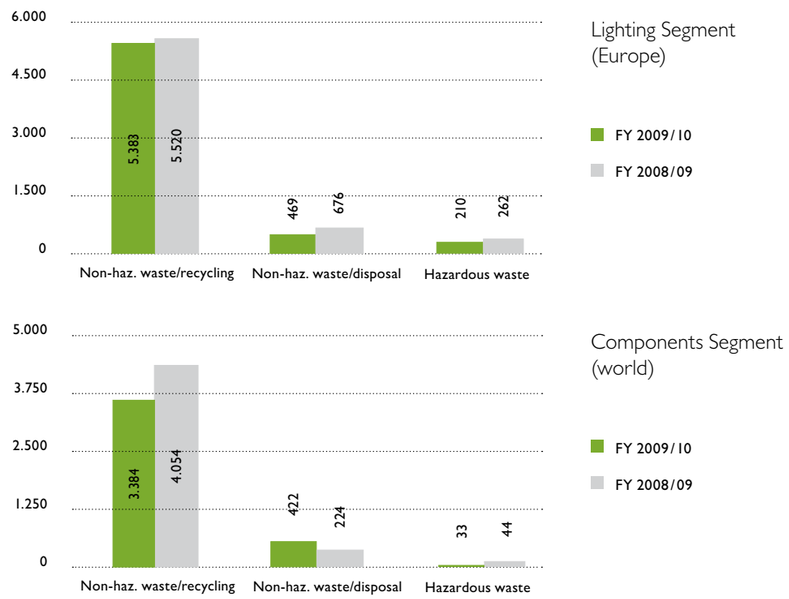
The waste disposal and recycling guidelines of the Lighting Segment can be viewed online; in addition, courses in waste avoidance, separation and collection are offered for employees.

In line with the specific production processes, different kinds of waste are generated in the two segments. In the Lighting Segment, plastics, wood (from pallet packaging), paper, cardboard and segregated metals (iron, copper and aluminium) are collected and depending on recyclability, sent for recycling or disposal. Hazardous waste in this segment includes lubricants, oils, paint residues and filter residues from wastewater treatment.

The Components Segment also segregates waste packaging from materials (cardboard boxes, plastic film, polystyrene, webbing, wood), metals (iron, copper, aluminium), plastics, cables, coils, magnetic waste and electronic waste as far as possible and sends them for recycling. Hazardous waste in this segment includes waste oil, resin waste, solvents, paints, adhesive residues, etc. which are handled by local recycling and waste disposal companies.

In the reporting year, the total volume of waste in the Lighting Segment was reduced from 6,457,587 kg in the previous year to 4,516,114 kg. The recycling quota in the Lighting Segment remained unchanged at 85%, while in the Components Segment it fell from 95% to its current level of 88%.

Total weight of waste by type and disposal method (in tons)



Conversion to powder coating at the Zumtobel brand's main plant in Dornbirn

New production processes have a beneficial impact on the environment and on costs

In 2007, the cataphoretic dip coating process for sheet metal parts at the lighting plant in Dornbirn was replaced by a new powder coating system.

In the past, solvents were added to paints and varnishes which were then sprayed onto the parts. In the powder coating process, paint particles are applied electrostatically. This dispenses with the need for waste air treatment with filter systems and afterburners. The volume of detergents required for cleaning the parts before coating has also been reduced.

The new powder coating process has meant that the volume of wastewater has been cut by 80%. Energy requirements in terms of power and heat are each down by 40%. Hazardous waste of 23 metric tons per year has been eliminated. And in all, 40% of the carbon emissions from the painting process, which equates to 500 metric tons a year, no longer occur. In terms of operating costs, this means a drop of 58%.

5.7. Efficient transport logistics

One important lever when it comes to reducing emissions is making transport logistics as efficient as possible. To enable the more flexible implementation of the transport concepts of the two segments, all transport activities have been outsourced to external service providers.

Means of transport selected in line with commercial and ecological criteria

The transport concepts in both segments are aligned with multiple criteria. When it comes to selecting the means of transport, commercial considerations and scheduling take priority. At the same time, the volumes of carbon emissions generated by the different means of transport are also taken into account. In many cases, the best commercial option is also the most sensible from an ecological viewpoint. Air freight, for example, is avoided on account of the high costs and products are preferably dispatched by sea instead. When selecting a transport provider, the Lighting Segment gives preference to suppliers who use rail transport or have integrated the railways into their network.

When transporting goods to market, the volume of goods being transported is another criterion that is taken into account. This means that different service providers are commissioned depending on whether small parcels, consignments of goods, part or full loads are to be shipped.

Optimised transport processes during procurement, production and sales

Making use of combined procurement, production and sales consignments is becoming increasingly common. This means that along with the choice of the right logistics partner, internal processes including transport processes are subject to ongoing optimisation. By way of example, at many Zumtobel Group plants baling presses are now in use to reduce volumes of waste and minimise the number of truck runs required to collect it.

In the Lighting Segment, deliveries involving the collection of goods from several warehouses are largely avoided. Along with the use of double-decker loading for trucks, one key aspect of the transport system for procurement and production is the use of a logistics network (see information box). This involves bundling the transport runs via a hub system (a star-shaped network with a central hub) which the Components Segment will also be utilising from May 2010 onwards.

This logistics network in the Lighting Segment is also linked to the sales network which works in line with the fast and ecologically meaningful "milk run principle" (with just-in-time deliveries). Wherever it makes sense, return trips from customers are used to transport raw materials and semi-finished products to the respective production plants. Another aspect that supports the more efficient use of resources in the transport sector is the ongoing optimisation of order picking processes.

The increased level of procurement in China by the Components Segment is to be offset by making better use of the volume of freight, e.g. using less packaging material or loading the chosen means of transport more efficiently. The capacity of containers, for example, is to be exploited more effectively and to this end a suitable packaging concept is being drawn up. Prototypes were tested in the 2009 / 10 financial year.

THE LIGHTING SEGMENT'S EXEMPLARY TRANSPORT SYSTEM

Ever since 2002, the Lighting Segment's production logistics operations have been combining a logistical network that links the production plants with enhanced exploitation of transport capacities. A hub system (a star-shaped transport network with a central hub, see diagram) is complemented by an innovative double-decker loading system in which a metal framework creates an "upper deck" in a truck. Over long distances in particular, this makes for the optimum use of payload capacity and ensures that transport emissions are kept down.

All transport services are provided by external haulage companies. This helps to avoid trucks returning empty, since along with the Lighting Segment hubs, the trucks can also call at the haulage company's own hubs to pick up and drop goods for other customers, making optimum use of their payload capacity.

The Lighting Segment's logistics network comprises five hubs. The main hub in Venlo (the Netherlands) provides the central link to the four strategically located production facilities in Dornbirn, Landskrona, Spennymoor and Les Andelys.These, in turn, act as collection points for goods requiring transport to or from neighbouring countries within the Lighting Segment.

Thanks to this concept, the Zumtobel Group's Lighting Segment is able to ensure that the trucks operated by its haulage partners maintain an average payload capacity of 80%. The double-decker system alone almost halves the transport mileage, cutting carbon emissions by at least 40%.

NEW THORN AND TRIDONIC PRODUCTION PLANT IN SPENNYMOOR

The opening of the new plant in Spennymoor, England, at the beginning of 2009 marked a milestone in in-process environmental protection. The plant features not only impressive intelligent lighting solutions and state-of-the-art production machinery but also enhanced ergonomics in the production processes themselves. The facility is used by the Thorn and Tridonic brands, accommodating a large lighting plant and a smaller components plant under one roof. The new production plant replaces the old, inefficient factory where the flow of materials had been less than ideal.

The following data applies to the Thorn lighting plant, which occupies the majority of the facility's surface area.

Optimisation of production processes has cut materials flow distances by 42%. This has led to substantial time savings, reduced the amount of effort required from employees and halved the number of forklift trucks needed.

A new powder-coating plant has reduced harmful gaseous emissions and cut water consumption (see "New powder coating plant" information box).

The intelligent building planning process included a sustainable lighting solution. Large windows (30% glass façades on two sides) and roof windows (20% of roof surface) let in lots of daylight. This not only saves artificial lighting but also enhances the work environment.

Thanks to the various measures implemented, the Spennymoor plant can present an exemplary environmental balance sheet: more than 95% of waste at the plant is sent for recycling, and compared to the old Spennymoor factory, carbon emissions have been cut by roughly a quarter (from 10.2 million kg CO_2 to 7.7 million kg).

Lighting management systems deliver the right light in the right place at the right time. Intelligent lighting management optimises the balance of daylight and artificial lighting, yielding energy savings of more than 70 %.

6. Employees

6.1. Introduction

Employees – the key to our success

The employees of the Zumtobel Group are the key to the success of our company. It is thanks to the dedication of our employees, who are among the best in their specialist fields and have outstanding leadership skills, that we are able to exceed the expectations of our customers. As. As we monitor and foster the professional development of our 7,329 employees, we are guided by the standards of innovation and quality that apply at the company.

Currently, the Zumtobel Group is facing new challenges brought about by the growing shortage of qualified professionals, the increasing internationalisation of the business and the technological trend towards electronics (not least in LEDs and control gear). Against this backdrop, the targeted professional development of our employees is more important than ever. Corporate HR supports local management in training personnel. We are currently reworking and adapting our human resources strategy to better address these challenges.

6.2. Employee satisfaction and retention

To operate successfully on the market and to remain competitive, the Zumtobel Group is dependent on motivated and dedicated employees. For this reason, one of the company's primary concerns is maintaining and continuing to improve its attractiveness as an employer. This includes aspects such as fair remuneration, individual prospects for career advancement, professional development opportunities and vocational training programmes, and support in balancing family and career.

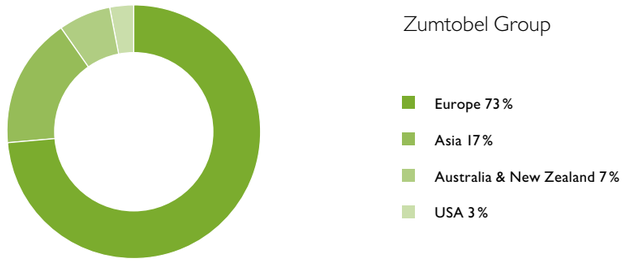
A good relationship between employer and employee

The Zumtobel Group's Corporate Values lay the cornerstone for the relationship between employer and employee. We aim to offer our employees unique opportunities to develop to their full potential and deliver outstanding performance. At the same time, the Zumtobel Group promotes an atmosphere of openness, creativity, honesty and respect for cultural diversity. We encourage the entrepreneurial spirit of our employees.

Group-wide employee survey

In the 2007/08 financial year, the Zumtobel Group carried out its first Group-wide employee survey with the goal of quantifying the job satisfaction of our employees and the integration of our Corporate Values in their daily work. Sixty per cent of the workforce took part in the survey, which gave employees the opportunity to evaluate aspects of their work such as customer focus and team spirit. Both of these aspects received high marks. In contrast, employees rated access to professional training and the leadership provided by management as in need of improvement. This led to the introduction of measures such as mandatory leadership training for all managers.

Total workforce by region based on 2009/10 financial year



6.3. Human resources development

Our human resources development measures are designed to foster and grow the achievement potential of our people and to acquire the right talents for key positions. At Zumtobel, the importance of systematic human resources development, which addresses specific needs, has grown over the years – and is all the more relevant in times of economic crises.

Continuing professional development based on employee review meetings

Our employee review meetings lay the groundwork for the individual advancement of each employee. The entire workforce undergoes these reviews, which take place once a year between employee and manager. Performance, professional competence and soft skills are evaluated, objectives are set for the coming year and individual development measures are defined.

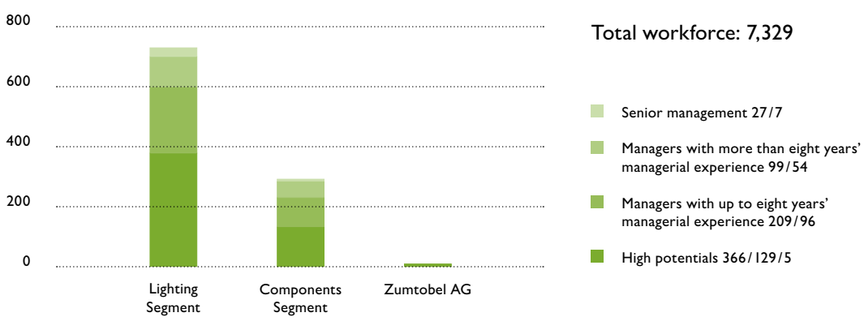
In addition, managers can make use of an online application to receive a 360-degree review of their performance in which specific feedback is given by colleagues and customers. This allows an evaluation of performance, professional competence and soft skills from a number of different perspectives.

To further their professional development, employees can attend external training courses and participate in our constantly expanding internal training programme. Specialised brand academies cover specific professional skills. Corporate training offers training in leadership and soft skills, including courses in communication and moderation as well as project management seminars.

In light of the growing internationalisation of the Zumtobel Group, our internal leadership training was reconceptualised in the 2008/09 financial year. Within three years, all managers across the Group must complete a special training course tailored to their individual experience and level of hierarchy. Classes for managers with international responsibilities are conducted in English, while managers with local responsibilities attend courses in the language of their country. In the 2009/10 financial year, managers from across the Zumtobel Group completed a total of 1,076 days of training. (2008/09: 870 days).

In terms of the sustainability, the Zumtobel Group takes advantage of the possibility of offering training content locally. With a view to long-term sustainability, the Zumtobel Group also takes advantage of opportunities to offer learning content on a decentralised basis, as necessary. This is accomplished in part through classroom training that is offered locally in different countries, and in part through the intensive use of e-learning within a blended learning approach.

Training measures for management in person training days based on 2009/10 financial year



Specialised brand academies

All employees with direct customer contact, above all our sales staff, are "ambassadors of light" for the brands of the Zumtobel Group. For this reason, all three brands offer a special training programme for these employees.

The Zumtobel brand offers on-the-job training that allows employees to qualify as Zumtobel Lighting Solution Consultants; in the 2009/10 financial year, sales staff including distributors participated in a total of 2,341 training days (2008/09: 2206). The course content included brand-specific skills related to technologies, products, applications, customer needs and business processes. The courses are held at Zumtobel's three Light Forums and 15 Light Centres.

Thorn founded the Thorn Academy of Light in the 2007/08 financial year, and at the beginning of 2009 the academy moved into attractive premises in the new Thorn plant in Spennymoor, UK. In the 2008/09 financial year, employees attended a total of 526 days of training at the Thorn Academy of Light. This represents two days of professional training per year for each member of the sales staff.

At Tridonic, an in-house academy – the Tridonic Academy in Dornbirn, Austria – was also established in the 2007/08 financial year. The first year already saw attendance by international participants from more than 20 different countries. From the very beginning, courses were offered on a regional basis as required, for example in Turkey, China, Singapore and Australia. In the 2009/10 financial year, employees including distributors participated in 1,345.5 days of training through the Tridonic Academy (2008/09: 1,251).

The courses are conducted by experts from all relevant departments. High minimum standards are set for course content to ensure that the training is of high quality. The trainers complete professional "train the trainer" courses and receive internal coaching on how to conduct seminars.

One important aspect of the learning content is the topic of sustainability – specifically, sustainable lighting solutions. Here the courses integrate elements of Thorn's PEC and Zumtobel's Humanergy Balance initiatives (see "Brand sustainability campaigns" section). In autumn 2009, the Zumtobel brand also began offering special seminar modules on the topic of sustainability. Tridonic will also be including materials from its "ecolution" campaign in its course content in the future.

Lean Six Sigma for production employees

Since Lean Six Sigma was introduced in our plants (see "Sustainability management" section), production employees have received regular training in this area. These hands-on classes facilitate the direct implementation of improvement measures in the production sector, along the supply chain and in sales.

The Lean Six Sigma training initiative was launched in the 2008/09 financial year in all European lighting plants. It supplements the long-term local training campaigns that were launched in the 2007/08 financial year (e.g. for skilled production workers at the main lighting plant in Dornbirn). In the course of the reporting year, 173 employees (2008/09: 170) were trained at different levels and a further 182 employees are scheduled to undertake training.

In the Components Segment, 257 employees hold various Lean Six Sigma "belts" and are currently in charge of projects. In the reporting year, 47 employees earned belts at different levels. The focus here is on providing more intensive training in Lean Six Sigma methods for employees who already qualified as Lean Six Sigma experts (FY 2009/10). The goal is not to train more employees, but to increase the number of projects per employee.

Good prospects for junior managers

Each year, the Zumtobel Group's Leadership Development Programme selects junior managers with outstanding professional and social skills for targeted training measures. In the reporting year, for example, we were able to fill 80% (2008/09: 67%) of the company's senior management functions internally.

We have also established a Group-wide international management trainee programme. At the end of their two-year programme, the first management trainees were able to take up challenging positions within the company. In the 2009/10 reporting period, two additional trainees (2008/09: five) were brought on board for Sales & Marketing and Operations.

Training in seven professional fields

Our apprenticeship programmes are another important pillar of our human resources development, especially in Germany and Austria. Apprenticeships last a total of four years and are offered in the following seven fields: electrical systems, electronics, machine mechanics, toolmaking, plastics technology, production engineering and machining. In addition to the technical aspects, the training also covers soft skills. On 30 April 2010, the Zumtobel Group had a total of 147 apprentices (measured in full-time equivalents; 2008/09: 133) who were being trained in the different departments of the Lighting and Components Segments

6.4. Equal opportunity and diversity

The Zumtobel Group considers it essential that all employees are treated fairly and with respect. We also apply this principle to third parties – customer, suppliers, dealers, business partners and competitors.

Intercultural and international diversity in the Zumtobel Group

The Zumtobel Group offers equal opportunities to all employees. The Zumtobel Group's Code of Conduct (see "Sustainability in the Zumtobel Group") states that the company will not tolerate any form of discrimination, whether on the basis of age, disability, marital status, gender, culture, national or ethnic origin, political opinion (in accordance with the UN Convention on Human Rights), race, religion, sexual orientation or social class. This principle applies equally in all our business relationships.

Our personnel decisions are based on performance and qualifications – in hiring, training, remuneration and promotions. The Zumtobel

Group makes no distinction between female and male employees and always endeavours to hire local employees.

We make an active effort to promote the diversity of the Group's workforce, especially regarding multiculturalism and internationality. In addition to the specific language courses offered by external partners at Zumtobel and Tridonic, Corporate Training offers a training module on intercultural diversity. Foreign assignments and job rotation support the internationalisation of the company and offer employees the opportunity to extend their personal and professional development beyond national boundaries.

The reintegration of employees who return to work after maternity and parental leave, complies with legal requirements and in some cases goes a step further. For example, models that allow flexible working hours and working from home make it easier to balance career and family. Tridonic offers subsidised daycare for pre-school children at its main plant in Dornbirn.

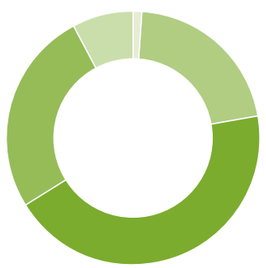
Job opportunities for young people with disabilities

The Zumtobel Group complies with the legal requirements for employing the disabled and endeavours to hire persons with disabilities

Employee diversity (LA13)

Gender breakdown based on 2009/10 financial year*

- Male 62%
- Female 38%



Age structure based on 2009/10 financial year*

< 18	1%
> 18-30	21%
> 30-45	44%
> 45-55	26%
> 55	8%

*Lighting Segment (Europe) and Components Segment (worldwide) based on 2009/10 financial year

when possible. This targeted integration and other support programmes for disabled persons help remove the barriers to joining the workforce. When we are not able to fill the quota for disabled employees at a specific facility, the Zumtobel Group pays the legally required fee.

As an expression of our commitment in this area, in 1989 the Lighting Segment launched a special initiative for the integration of young people with disabilities at the main plant in Dornbirn. Here we usually exceed the legal quota (1 in 25) for disabled employees. At present, 35 employees with disabilities work in the Dornbirn lighting plant.

As part of the Zumtobel brand's two-year career programme for persons with disabilities in Dornbirn, young people with disabilities are gradually introduced to the working environment of a production facility. This special job training helps prepare them for an independent career in the future. Every year, four or five young people join the programme; since 1989, more than 70 have completed the training. Twenty of these young people subsequently took up permanent employment with the company.

6.5. Occupational health and safety

The health and safety of our employees are assigned high priority throughout the Group. Consequently, the Lighting and Components Segments have introduced specific environmental, health and safety guidelines. These guidelines take the relevant international and national legislation and regulations as their minimum standards. Compliance with the guidelines is monitored by a health and safety representative in each facility. In a pilot project, the components plants in Dornbirn and Innsbruck were certified in accordance with the standards of the OHSAS 18001 health and safety management system in 2009 and 2010 respectively.

Campaign to reduce workplace accidents

In the 2009/10 financial year, 157 workplace accidents occurred at Zumtobel Group facilities (2008/09: 181). The majority of the accidents were caused by human error, with cuts being the most common injuries.

An accident reduction campaign was launched in the 2008/09 financial year. Along with intensive and ongoing communication and education for employees on preventing unsafe workplace behaviours, the different facilities have developed and carried out specific measures to prevent workplace accidents. For example, new equipment undergoes a safety

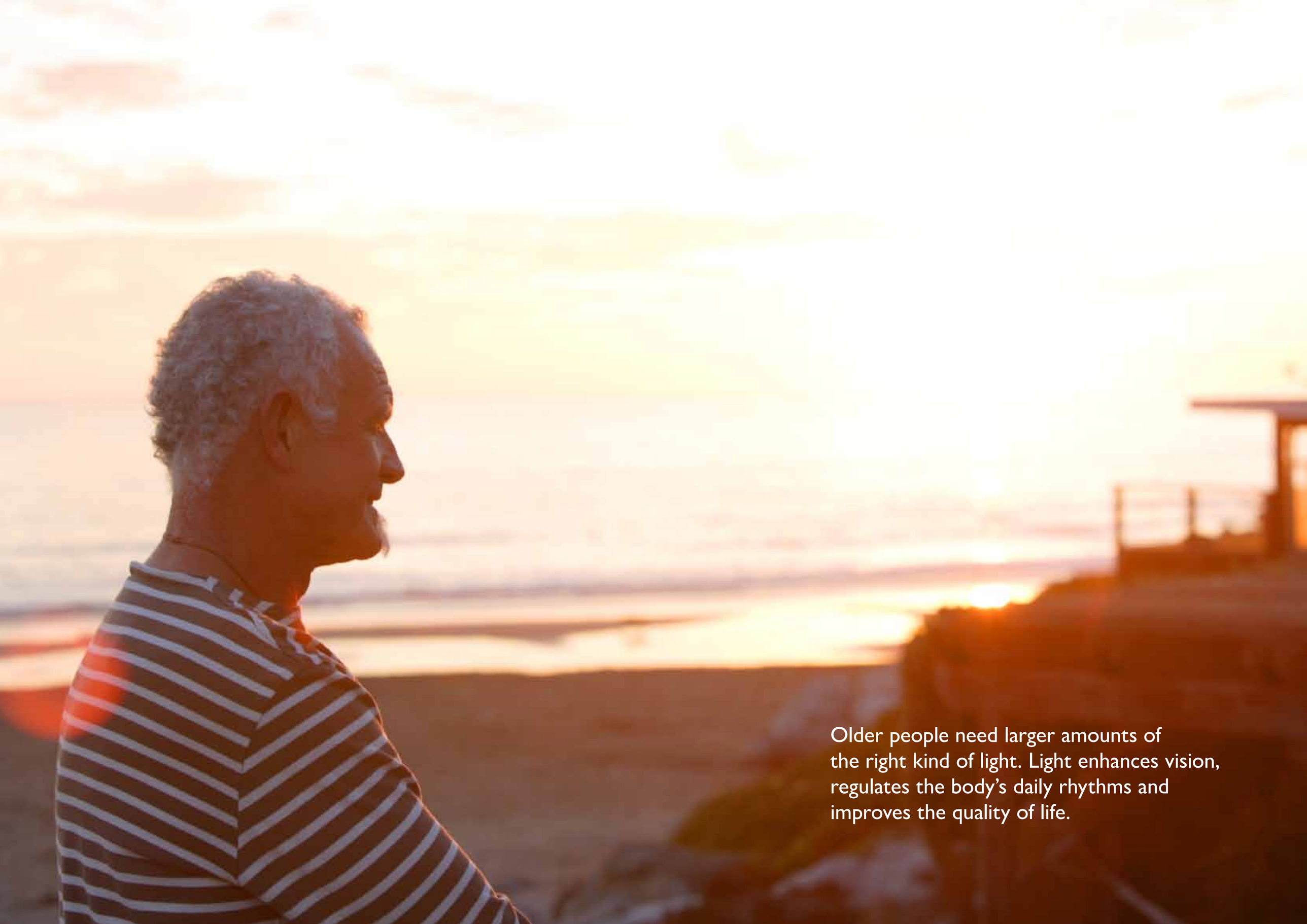
inspection and employees receive training in all safety-related aspects of the equipment. In the Dornbirn components plant, production workers now wear safety shoes and use safety knives. At the components facility in Innsbruck, risk assessments of plant and equipment have been performed in cooperation with the Austrian Social Insurance for Occupational Risks (AUVA), and suggestions for improving occupational safety taken up. Uniform monthly TRI rate (total recorded injuries per million hours worked) reporting has been introduced in all our plants.

Taken together, the lighting plants in Europe reported an increase in the TRI rate, from 17.4 in the previous year to 21.9 in the 2009/10 financial year. In our components plants, the worldwide TRI rate saw a substantial fall from 12.2 in 2008/09 to 8.3 in the reporting year. At Group level this represents a consolidated TRI rate of 17.4. In the long term, the Zumtobel Group is aiming to reduce the TRI rate to 10.

The number of working days missed due to injuries is measured by the LTI rate (time lost to injuries per million hours worked); in the 2009/10 financial year, the LTI rate was 18.13 (2008/09: 14.8) in the lighting plants and 7.34 (2008/09: 10.5) in the components plants.

Preventive health care and counselling

The Zumtobel Group's activities related to preventive health care and counselling are organised in a number of local projects. For example, many facilities offer on-site influenza vaccinations. The components plants in Dornbirn and Innsbruck have held training courses for managers in safety awareness and accountability. In 2010, the Usingen lighting plant launched a long-term health project that is initially focusing on back pain prevention, but will be expanded to include topics such as healthy nutrition and stress relief. Thorn in China has also recognised the importance of promoting health in the workplace, resulting in the launch of several activities. The annual health check-up for employees and a company badminton programme have both been very well received. Further initiatives are being planned.



Older people need larger amounts of the right kind of light. Light enhances vision, regulates the body's daily rhythms and improves the quality of life.

7. Supplier management

7.1. Introduction

The cooperation between the companies of the Zumtobel Group and their suppliers is built for longevity. Based on this, mutual fairness should be used to create both expertise and a dependable supply chain.

A "second source" strategy makes sure that production at Zumtobel is not held because of to a lack of supplies. This is achieved by establishing relations with several alternative suppliers for the same product.

Compliance with social and environmental standards along the entire supply chain is assigned high priority in both the Lighting Segment and the Components Segment, as this is the only way to ensure sustainability in the production sector.

7.2. Supplier management at the Zumtobel Group

The Zumtobel Group brands supply top quality products. This is only possible if the entire value chain is designed for sustainability. Consequently, for a long time now the Group has been committed to long-term partnerships with its key suppliers. This enables suppliers to make constant progress as they provide the Group's companies with the best materials and most innovative intermediate products.

Countries of origin: both segments source their supplies as locally as possible

The key commodity groups for the Lighting and Components Segments are sourced in different countries.

The Components Segment purchases mainly electronic components, steel and copper wire. The main country of origin for the electronics components is China, the country to which the most competitive suppliers have relocated in the course of globalisation. Steel, by contrast, is sourced in Central Europe for the European production plants and in Singapore for Australia. All four magnetic ballast plants obtain their copper wire locally.

The key commodity groups for the Purchasing departments in the Lighting Segment are electronic components (such as ballasts), metals (such as aluminium and steel) and plastic granules. To enable them to meet fluctuating customer demand as flexibly and rapidly as possible, the European luminaire plants obtain these materials as locally as possible ("buy local" strategy). This means that the main countries of origin for the Lighting Segment, accounting for 87.8% of the purchasing volume, are Germany, Austria, France, the UK, Italy and Sweden, plus China. The proportion of goods sourced in Asia in the 2008/09 financial year was 5.1%. However, a restructuring process is currently underway to shift that proportion of sourcing for the European plants back to Europe. By the end of April 2010, 80% had been relocated to Europe. The aim now is to complete this process by the end of the 2010/11 financial year. This means that the majority of materials and intermediate products are sourced from countries that represent a low risk in terms of compliance with environmental and social standards.

Zero tolerance for corruption; strict compliance with ILO Core Labour Standards

No corruption is tolerated in the business activities of the Zumtobel Group and its segments. Accordingly, in September 2004 the Zumtobel Group became the first Austrian signatory to the guidelines of the Partnering Against Corruption Initiative (PACI) of the World Economic Forum in Davos (see "Corporate governance" section).

The provisions of the PACI guideline are reflected in the Zumtobel Group's Code of Conduct (see "Sustainability management" section). The Code lays down the behaviour expected of all Group employees as well as of external third parties such as suppliers in critical areas of business life. Along with combating corruption, the recognition of the Core Labour Standards of the ILO forms an essential component of the Code. These standards demand freedom of association and recognition of the right to collective bargaining, and prohibit both child labour and forced labour (for further information visit www.ilo.org). The Zumtobel Group is not aware of any cases in which its suppliers have failed to comply with the ILO Core Labour Standards.

If a business partner should fail to comply with these provisions or other environmental or social standards laid down by the Lighting and Components Segments, the party concerned will be requested to desist from such behaviour. If this does not happen within a reasonable period, management will take appropriate steps, which could mean recourse to law or terminating collaboration.

As an internationally active company, the Zumtobel Group invariably respects the applicable national law when operating or manufacturing outside Austria.

Long-term supplier management founded on trust

Both Segments organise their purchasing activities in line with the "lead buyer" system. By bundling requirements for specific commodity groups, specialised but decentralised purchasers (lead buyers) can strengthen their negotiating position with respect to suppliers who are often also global players. This method has the added benefit of ensuring a coordinated strategic approach within the commodity groups. The lead buyer's requirements are then implemented by the local purchasing departments by accessing the terms negotiated by the lead buyer.

Both the Components Segment and the Lighting Segment place great importance to building trusting long-term relationships with their suppliers. This is particularly pronounced in the Components Segment, where business relations with 60% of the total of around 300 suppliers have been in place for over ten years. Another 34% date back between five and ten years and the remaining six per cent have been created during the past five years. The segment's structured supplier management system, based on regular inspections and training measures, has played its part here. All of these efforts are founded on the very demanding expectations that the Components Segment has of its suppliers, who are expected to contribute their knowledge and innovative capabilities to the business partnership. This means that they need to command the appropriate level of creative potential to meet the technical requirements and add value of their own.

Systematic quality monitoring and supplier audits

With a view to supplier management, the Components Segment has defined global processes for the approval of new suppliers, for regular supplier assessments, for audits and for training measures, which means that every step is duly documented. This effectively prevents any irregularities.

Before a new supplier is approved, two people from different functions conduct a three-stage qualification process. In stage two, for example, the supplier must provide written confirmation that a verifiable environmental management system is in place (although not necessarily compliant with ISO 14001) and that the Code of Conduct, of which they have received a copy, will be observed. This means that compliance with the ILO Core Labour Standards also forms part of the prerequisites for any business relationship. Components Segment suppliers who account for 86% of the segment's purchasing volume have confirmed that they will observe the Code of Conduct. The remainder were able to prove that they had their own appropriate standards in place. In future, the Components Segment will be increasingly insisting on documentary proof that the ILO Core Labour Standards are adequately observed and will make this part of its standard supply agreements.

Supplier assessments are conducted every six months. These assess product quality, schedule effectiveness and service. At the same time, compliance with the Code of Conduct and the ongoing existence of an effective environmental management system are also checked. In addition, based on the findings of the supplier assessments, in November 2008 the four best suppliers were presented with an Excellent Supplier Award. Presentation of these annual awards was then shelved for one year on account of the economic crisis, but the next awards ceremony is now scheduled for autumn 2010. The. The Excellent Supplier Award also serves to build trust and strengthen long-term ties with outstanding suppliers.

The criteria for the supplier audit are based on those of the supplier assessment. An audit is performed if the assessment reveals critical values for a particular supplier or if a new supplier is scheduled for approval. As suppliers are considered partners, they should not feel threatened by the audit process. The aim is rather to reveal scope for improvement and derive the appropriate measures. Here, too, one criterion is the existence of an effective environmental management system. Ten auditors, all trained in-house, conduct the audits. In future, they will be aiming to take greater account of the ILO Core Labour Standards.

Supplier training measures to remedy quality problems are introduced selectively if a supplier fails to adequately meet the requirements of the zero defect philosophy in line with the Six Sigma methodology. On average, the purchasing function in the Components Segment conducts 25 Lean Six Sigma projects per year. These focus on process improvements and the resulting cost savings. Several such projects have been designed in collaboration with suppliers to help introduce them to the methodology and benefits of Lean Six Sigma.

The projects target such aspects as cutting production waste at the supplier's premises, reducing lead times by increasing flexibility, or avoiding unscheduled transport runs. By way of example, one project conducted in the 2008/09 financial year in conjunction with three key suppliers to the main components plant in Dornbirn concerned the reduction of unpacking times and thus the simplified receipt of incoming goods. The time and effort expended in the incoming goods department were cut by one third.

In the Lighting Segment, by way of risk management, since the beginning of 2010 all new suppliers of production material and commodities have been subjected to an assessment process that is due to be in place at all Lighting Segment production plants by autumn 2010. Along with a self-disclosure document, this also includes an audit when there is a firm intention to do business with the supplier in question. The audit includes checking compliance with legal provisions such as RoHS, REACH and WEEE (see "In-process environmental protection" chapter) and certification to ISO 9001 and ISO 14001. Performance of this audit is a prerequisite for the acceptance of the supplier.

Innovative lighting concepts direct light to where it is most effective. At night, carefully located lighting gives us a sense of security and orientation.

8. Sponsorship

8.1. Introduction

Promoting art projects drives innovation

Non-profit engagement enjoys high priority at the Zumtobel Group. In particular, the Zumtobel brand makes use of the close links with its network of partners in this respect. Art projects form the creative spearhead of the brand's innovative efforts – by providing the opportunity and latitude to experiment. The main focus here is on collaboration with and support for internationally renowned artists and / or museums and galleries. In general, the projects concerned bear a strong relation to the brand's core business and drive innovation by signposting new approaches to the use of artificial light.

Non-profit engagement is also pursued by the other Zumtobel Group brands as well as at corporate level, while a variety of local charitable activities round off the overall picture.

8.2. Engagement at all levels of the company

From Group-wide activities to sponsorship in the local community, the Zumtobel Group's engagement takes place at all levels of the company.

International Award for Sustainability and Humanity in the Built Environment

In the fields of architecture, urban and landscape planning and engineering in particular there are many avenues of approach to greater sustainability. What is called for here is a combination of scientific knowledge, technical innovation and creativity. To honour outstanding sustainable solutions in architecture and engineering, the Zumtobel Group has created the "Zumtobel Group Award for Sustainability and Humanity in the Built Environment". Curatorship of the award is in the hands of Aedes Architecture Forum in Berlin. Nominations are judged by an international jury of globally acknowledged experts representing a wide variety of disciplines. The award is granted in two categories: fostering built and realised projects and ongoing research work and independent initiatives. The award, which is presented every two years, carries a total purse 140,000 euros. The. The inaugural competition was held in 2007. On account of the economic crisis, the second award was not presented until the beginning of 2010. A series of books entitled "Architecture of Change" is based on the outcome of the Zumtobel Group Awards. For further information visit www.zumtobel-group-award.com.

Engagement of the brands around their core business

The Zumtobel brand supports artistic lighting projects. This provides a means of squaring up to the new challenges of lighting in a particularly creative manner and generates new impetus for the ongoing enhancement and expansion of the product portfolio, as well as driving progress in the Group's corporate culture. This engagement is based on long-term collaboration with prominent international architects, designers and artists within the scope of the brand's close-knit network. In recent years, the Zumtobel brand has implemented projects together with such leading figures as James Turrell, Olafur Eliasson, Carsten Höller, Siegrun Appelt and Keith Sonnier. Along with several centres of architecture, the Zumtobel brand also supports museums and galleries in the realisation of exhibitions and installations, including Kunsthaus Bregenz, Zentrum für Kunst und Medientechnologie (ZKM) in Karlsruhe, Schirn-Kunsthalle in Frankfurt am Main and Kunstmuseum Wolfsburg.

Along with these activities there were also smaller local engagements, such as the Zumtobel brand's presentation of a prize for engineering students in Lemgo, Germany, where the company has a production facility. The prize carried a total purse of 1,200 euros. In the course of a project seminar, the five award-winners designed what, from the company's point of view, was the most innovative and cost-effective mounting solution for a professional lighting system.

As a member of LUCI (Lighting Urban Community International), a body that brings together companies, lighting designers, architects, universities and some 60 towns and cities, since 2007 the Thorn brand has been supporting the LUCI LightLinks competition. LightLinks promotes cooperation between cities in countries with high and low per capita income, with the aim of realising urban lighting solutions in the financially challenged locations and thereby contribute to their economic and social development. The initial project concerns illuminating historical landmarks in the City of Jericho on the Palestinian West Bank. The sister city in this case is Lyon, France, where the LUCI network was first initiated.

The sponsorship activities of the Tridonic brand are focused in particular on the field of vocational training and higher education. By way of example, the brand maintains very close relations with educational establishments in the Austrian Tyrol in the vicinity of its components plant in Innsbruck. These include the Höhere Technische Bundeslehranstalt (HTBLA – Technical College) in Fulpmes and the local vocational schools for metalworking and electrical engineering. For over 20 years now, Tridonic has been responsible for equipping the showcases at the HTBLA, organising

excursions, offering internships and stewarding final papers for prospective technical college graduates.

For the past two-plus years, Tridonic has also adopted a new approach to recruiting skilled staff for the development sector by cooperating with universities in the UK and Switzerland. This involves providing scholarships for selected students whose studies are geared to topics of relevance to Tridonic. The students select topics of interest to Tridonic for their project work and can gain practical experience at the company during semester breaks.

Charity work

Along with activities that are closely linked with their core business, the Group's brands also demonstrate engagement in a number of charitable projects in the wider interests of society and public welfare.

At the Spennymoor plant, for example, employees enter the 5k Race for Life to raise money for cancer research. In the course of its marketing activities, the Lighting Segment makes regular donations to the Light for the World initiative, contributing one euro for each new registration for its free customer e-newsletter, for example. Light for the World helps people in poverty-stricken areas recover their sight through an eye operation.

Every year in spring, the traditional Zumtobel Group ski race takes place in the Bregenzer Wald region of Austria. For the past three years, the proceeds of the event have been donated to the Vorarlberg Lebenshilfe charity for the disabled.

Furthermore, when natural disasters strike, the Zumtobel Group also makes donations to disaster relief organisations, most recently following the earthquake in Haiti. Employees and management produced a generous response that resulted in a total donation of EUR 60,000.

LEDs represent a quantum leap in light sources. Innovative semiconductor technology ensures high energy efficiency and optimum light quality, matching the natural light of a candle.

9. Facts and figures

9.1. Introduction

The "facts and figures" section provides an overview of core indicators. The corresponding GRI indicators are shown in brackets. A list of the GRI indicators appears in the GRI Index on p. 128.

Unless indicated otherwise, the data relates to the 2009/10 financial year. For the Lighting Segment, the scope of consolidation includes the European production plants; for the Components Segment, it includes all production plants worldwide.

9.2. In-process environmental protection

Overview of plants certified to ISO 14001 *

Certified plant	Country	Region	Certified since
Thorn Lighting Nordic AB, Landskrona	Sweden	Europe	01.12.97
TridonicAtco GmbH & Co KG, Dornbirn	Austria	Europe	26.06.05
TridonicAtco connection technology GmbH & Co. KG, Innsbruck	Austria	Europe	28.06.05
LEDON Lighting Jennersdorf GmbH	Austria	Europe	28.06.05
Zumtobel Lighting GmbH, Dornbirn	Austria	Europe	01.03.09
Thorn Lighting Limited, Spennymoor	UK	Europe	01.06.09
Zumtobel Lighting GmbH, Lemgo	Germany	Europe	01.07.09
Zumtobel Lighting GmbH, Usingen	Germany	Europe	01.11.09
TridonicAtco Shenzen Co., Ltd., Longhua	China	Asia	01.07.05
Tridonic Schweiz AG, Ennenda	Switzerland	Europe	planned for May 2010
TridonicAtco controls & systems, Dornbirn	Austria	Europe	planned for June 2010
Tridonic GmbH & Co. KG, Spennymoor	UK	Europe	planned for spring 2011
Thorn Europhane, Les Andelys	France	Europe	planned for FY 2010/11

* The Space Cannon plant in Fubine, Italy is not listed as no standard production process takes place there.

EN3: Direct energy consumption

		Lighting Segment (Europe)			Components Segment (world)		
	Unit	2009/10	2008/09	Difference	2009/10	2008/09	Difference
Light fuel oil	MWh	2,860	2,561	11,68%	769	847	-9,21%
Gas*	MWh	25,859	31,924	-19,00%	6,936	7,681	-9,70%
Direct energy consumption	MWh	28,719	34,485	-16,72%	7,705	8,528	-9,65%
Direct energy consumption per unit**	MWh/ unit	0,0030	0,0033		0,0001	0,0001	

*There was a major reduction in gas consumption following the move to the new factory and office building in Spennymoor.
**Water withdrawal per unit is not directly comparable with the previous year due to imprecision as a result of rounding off the decimal points.

EN4: Indirect energy consumption

		Lighting Segment (Europe)			Components Segment (world)		
	Unit	2009/10	2008/09	Difference	2009/10	2008/09	Difference
Electricity	MWh	39,711	38,652	2.74%	25,219	26,721	-5.62%
District heating	MWh	7,623	6,961	9.51%	0	0	
Indirect energy consumption	MWh	47,334	45,613	3.77%	25,219	26,721	-5.62%
Indirect energy consumption per unit*	MWh/ unit	0.0049	0.0043		0.0003	0.0004	

*Indirect energy consumption per unit is not directly comparable with the previous year due to imprecision as a result of rounding off the decimal points.

EN8: Water withdrawal

		Lighting Segment (Europe)			Components Segment (world)		
	Unit	2009/10	2008/09	Difference	2009/10	2008/09	Difference
Total water withdrawn from municipal water supplies**	m³	40,353	59,774	-32,49%	24,543	25,852	-5.06%
Water withdrawal per unit***	m³/unit	0.0042	0.0056		0.0003	0.0004	

*There was a major reduction in water withdrawal following the move to the new factory and office building in Spennymoor.
**When appropriate, includes ground water and rain water.
***Water withdrawal per unit is not directly comparable with the previous year due to imprecision as a result of rounding off the decimal points.

EN16: Direct greenhouse gas emissions

		Lighting Segment (Europe)			Components Segment (world)		
	Unit	2009/10	2008/09	Difference	2009/10	2008/09	Difference
Light fuel oil	t CO_2	751	671	11,92%	215	237	-9,28%
Gas	t CO_2	5.771	7.030	-17,91%	930	936	-0,64%
Direct greenhouse gas emissions	t CO_2	6.522	7.701	-15,31%	1.145	1.173	-2,39%
Direct greenhouse gar emissions per unit*	t CO_2/ unit	0,0007	0,0007		0,0000	0,0000	

*Direct greenhouse gas emissions per unit are not directly comparable with the previous year due to imprecision as a result of rounding off the decimal points.
CO_2-emissions factors: Indirect greenhouse gas emissions: Electricity: 0,251 t/MWh.
District heating: 0,170 to 0,181 t/MWh.

EN16: Indirect greenhouse gas emissions

		Lighting Segment (Europe)			Components Segment (world)		
	Unit	2009/10	2008/09	Difference	2009/10	2008/09	Difference
Electricity	t CO_2	9,962	9,715	2.54%	8,438	9,570	-11.83%
Fernwärme	t CO_2	1,293	1,259	2.70%	0	0	
District heating	t CO_2	11,255	10,974	2.56%	8,438	9,570	-11.83%
Indirect greenhouse gas emissions*	t CO_2/ unit	0.0025	0.0022		0.0002	0.0002	

*Direct greenhouse gas emissions per unit are not directly comparable with the previous year due to imprecision as a result of rounding off the decimal points.
CO_2-emissions factors: Indirect greenhouse gas emissions: Electricity: 0,251 t/MWh.
District heating: 0,170 to 0,181 t/MWh.

EN21: Total water discharge*

	Unit	2009/10	2008/09	Difference	2009/10	2008/09	Difference
Water discharge	m³	40,353	59,774	-32.49%	24,543	25,852	-5.06%
Water discharge per unit produced**	m³/unit	0.0042	0.0056		0.0003	0.0004	

*There was a major reduction in water discharge following the move to the new factory and office building in Spennymoor.
**Water discharge per unit is not directly comparable with the previous year due to imprecision as a result of rounding off the decimal points.

EN22: Weight of waste by type and disposal method

		Lighting Segment (Europe)			Components Segment (world)		
	Unit	2009/10	2008/09	Difference	2009/10	2008/09	Difference
Non-hazardous waste for recycling (metals, cardboard plastic, etc,)	kg	5,382,530	5,519,911	-2.49%	3,383,561	4,053,716	-16.53%
Non-hazardous waste for disposal*	kg	469,279	676,110	-30.59%	422,288	223,952	88.56%
Hazardous waste (e,g, waste oil, solvents, paints, etc,)*	kg	210,475	261,563	-19.53%	33,241	44,361	-25.07%
Total waste	kg	6,062,284	6,457,584	-6.12%	3,839,090	4,322,029	-11.17%
Waste per unit produced	kg/Einheit	0.4657	0.6092		0.0500	0.0651	

*There was a major reduction in water withdrawal following the move to the new factory and office building in Spennymoor.

EN27: Fees paid to maintain recovery points for products*

		Lighting Segment (Europe)		
WEEE fees	Unit	2009/10	2008/09	Difference
Austria	EUR	127,569	146,062	-12.66%
Germany	EUR	61,940	64,104	-3.38%
Benelux	EUR	100,673	96,863	3.93%
Nordic	EUR	80,837	83,591	-3.29%
Switzerland	EUR	0	0	
Italy	EUR	48,540	53,537	-9.33%
France	EUR	303,324	220,651	37.47%
UK	EUR	341,447	449,564	-24.05%

*Instead of maintaining its own recovery/collection points, the Zumtobel Group makes use of the option of supporting central recovery points through payment of a fee.
The Components Segment is only governed by the WEEE Directive in respect of bans on the use of materials (all production plants). The Components Segment's products are deemed to be components for which no disposal fees are payable to the collection and recycling organisations.

9.3. Employees

LA1: Total workforce including contract workers*

		Zumtobel Group (worldwide)		
	Unit	2009/10	2008/09	Diff,
Lighting Segment	FTE	5,155	5,261	-2.02%
Components Segment	FTE	2,048	1,775	15.38%
Zumtobel AG	FTE	126	129	-2.02%
Zumtobel Group**	FTE	7,329	7,165	2.29%

**Figures have been rounded, **Information including ZAG (126.4)

LA1: By employment type based on 2009/10 financial year*

		Lighting Seg, (worldwide)		Components Seg, (worldwide)		Zumtobel Group (worldwide)	
	Einheit,	FTE	%	FTE	%	FTE	%
Production	FTE	2,492	48.34%	1,310	63.96%	3,802	52.78%
Research & Development	FTE	170	3.29%	261	12.76%	431	5.98%
Sales	FTE	1,907	36.99%	271	13.21%	2,177	30.23%
Administration	FTE	347	6.74%	119	5.83%	467	6.48%
Others	FTE	240	4.65%	87	4.25%	327	4.53%
Workforce incl, contract workers	FTE	5,155	100.00%	2,048	100.00%	7,203**	100.00%

*Figures have been rounded; **The difference is ZAG (126,4)

LA1: By region based on 2009/10 financial year*

		Lighting Seg. (worldwide)		Components Seg. (worldwide)		Zumtobel Group (worldwide)	
	Unit	FTE	%	FTE	%	FTE	%
Europe	FTE	3,964	76.89%	1,310	63.98%	5,274	73.22%
Asia	FTE	697	13.53%	540	26.37%	1,237	17.18%
Australia & New Zealand	FTE	292	5.66%	198	9.65%	490	6.80%
USA	FTE	202	3.92%	0	0.00%	202	2.80%
Workforce incl. contract workers	FTE	5,155	100.00%	2,048	100.00%	7,203	100.00%

*Figures have been rounded

LA7: Rates of injury and lost days

		Lighting Segment (Europe)			Components Segment (world)		
	Unit	2009/10	2008/09	Diff.	2009/10	2008/09	Diff.
LTI* rate	incidents	18	14.8	22.30%	7	11	-30.48%
LTI* total	incidents	109	68	60.29%	22	30	-26.67%
TRI** rate	incidents	21.9	17.4	25.86%	8.3	12.2	-31.97%
TRI** total	incidents	132	80	65.00%	25	35	-28.57%

* Lost Time Injuries

** Total Recorded Injuries

LA10: Training measures

for sales staff (in person training days)

		Lighting Segment (Europe)			Components Segment (world)		
	Unit	2009/10	2008/09	Diff.	2009/10	2008/09	Diff.
Employees	days	1,913	2,732	-29.98%	450	1,302	-65.44%
Distributors*	days	88	135	-34.81%	42	51	-18.63%
Total	days	2,001	2,867	-30.21%	492	1,353	-63.67%

* Distributors are persons closely related to the company, such as sales agents in the various countries.

for management (in person training days)

		Lighting Segment (Europe)			Components Segment (world)		
	Unit	2009/10	2008/09	Diff.	2009/10	2008/09	Diff.
High potentials	days	366	291	25.77%	129	159	-18.87%
Managers with up to eight years' managerial experience	days	209	176	18.75%	96	47	104.26%
Managers with more than eight years' managerial experience	days	99	81	22.22%	54	21	157.14%
Senior management	days	27	70	-61.43%	7	10	-30.00%
Total	days	701	618	13.43%	286	237	20.68%

LA13: Employee diversity

Age structure*	Unit	2009/10	Proportion
< 18	employees	70	1.16%
> 18 - 30	employees	1,238	20.50%
> 30 - 45	employees	2,665	44.13%
> 45 - 55	employees	1,558	25.80%
> 55	employees	508	8.41%
Total	employees	6,039	100.00%

Gender breakdown*	Unit	2009/10	Proportion
Male	employees	2,291	38.00%
Female	employees	3,748	62.00%
Total	employees	6,039	100.00%

* For the HR indicators sometimes the number of employees is used and sometimes FTEs. This is because no uniform data is available. We aim to present FTE data for all these indicators in the next report. The data covers the Lighting Segment (Europe), the Components Segment (worldwide) and Zumtobel AG.

EC7: Hiring of local senior management

Standort	Country	Unit	Proportion (abs)	Proportion (%)
Thorn Europhane SA	France	employees	3 of 4	75%
Thorn Lighting Ltd.	UK	employees	1 of 1	100%
TridonicAtco GmbH & Co KG	Austria	employees	5 of 9	56%
Zumtobel AG	Austria	employees	7 of 12	58%
Zumtobel Lighting GmbH	Austria	employees	5 of 16	31%

The Zumtobel Group has a total of 79 LIPs*. 46 of these (58%) are filled locally.

Number of LIPs* filled locally out of total LIPs per plant, based on 2009/10 financial year

9.4. Finances

EC1: Direct economic value generated and distributed

Revenues
Net revenues in EUR millions/financial year

Revenues	2009/10	2008/09	2007/08	2006/07
Total	1,117.3	1,174.0	1,282.3	1,234.0
Zumtobel Lighting	818.0	870.5	948.4	921.8
Components	298.8	302.7	333.0	311.9
Regions	**2009/10**	**2008/09**	**2007/08**	**2006/07**
D/A/CH	282.2	298.5	308.9	292.3
Eastern Europe	58.3	66.7	67.9	61.8
Northern Europe	91.2	97.5	106.9	99.3
Western Europe	353.1	383.5	427.4	410.0
Southern Europe	95.4	105.7	129.9	119.2
Asia	95.9	88.7	87.4	93.4
Australia & New Zealand	100.6	89.9	107.5	103.2
USA	30.2	31.9	35.5	41.5
Rest of the world	10.3	11.5	10.9	13.1

Revenues from financial investments in EUR millions/financial year

in EUR millions	2009/10	2008/09	2007/08	2006/07
Interest income (from income statement)	2.0	2.1	4.4	2.4

Revenues from the sale of assets in EUR millions/financial year

in EUR millions	2009/10	2008/09	2007/08	2006/07
Gain/loss from the disposal of assets (from income statement)	0.0	17.7	4.8	0.6

Betriebskosten

in EUR millions	2009/10	2008/09	2007/08	2006/07
Cost of materials and third-party services	-486.1	-506.7	-558.5	-529.6

Employee wages and benefits:

in EUR millions	2009/10	2008/09	2007/08	2006/07
Wages	-70.4	-73.4	-80.0	-83.2
Salaries	-208.6	-214.4	-217.1	-204.5
Expenses for severance compensation	-0.7	-2.6	-3.6	-2.8
Expenses for pensions	-3.5	-2.9	-5.7	-2.4
Expenses for legally required social security duties and mandatory contributions	-57.3	-59.4	-58.2	-59.3
Other employee benefits	-10.7	-12.6	-12.7	-11.5
Expenses from restructuring	-7.5	-20.7	-2.0	0.0
Total	-369.0	-386.0	-379.3	-363.7

Payments to providers of funds:
Dividends: dividend payments (from cash flow statement)

in EUR millions	2009/10	2008/09	2007/08	2006/07
Dividends (from cash flow statement)	-0.5	-31.3	-22.6	0.0

Interest to loan providers:

in EUR millions	2009/10	2008/09	2007/08	2006/07
Interest expense (from income statement)	-10.1	-22.6	-22.6	-24.8

Payments to government

in EUR millions	2009/10	2008/09	2007/08	2006/07
Income tax	-6.0	-6.3	6.1	3.9

Community investments

No data available

Investments in R&D

in EUR millions	2009/10	2008/09	2007/08	2006/07
R&D expenditures (Income Statement)	36.9	34.5	28.4	25.5
Capitalised R&D	14.2	13.1	12.7	10.8
R&D total	51.1	47.6	41.1	36.3
R&D as % of revenues	4.6	4.1	3.2	2.9
Headcount in R&D	431.0	449.0	411.0	364.0

EC3: Extent of defined benefit plan obligations

FY 2008/09: Annual Financial Report 2.5.5.14 – Pension Obligations (p. 86ff)
FY 2009/10: Annual Financial Report 2.6.6.17 – Pension Obligations (p. 65ff)

EC4: Public sector financing

Received research grants in EUR*	2009/10	2008/09
Lighting Segment (world)	623,000	728,000
Components Segment (world)	1,653,000	3,244,000
Zumtobel Group (total)	2,276,000	3,972,000

*Figures were rounded

9.5. Memberships

Memberships – the Zumtobel Group and its brands

Association	Membership via/as	Geographic coverage	Membership since
Partnering Against Corruption Initiative (PACI)	Zumtobel Group	Global	2004
CorporAID	Zumtobel AG	Austria	2007
Respact	Zumtobel AG	Austria	2008
CELMA – Verband der Herstellerverbände	FEEI, ZVEI and other national associations	Europe	1991 (founder member))
CELMA – Federation of National Manufacturers Associations	CELMA registered company – Thorn and Zumtobel brands	Europe	2007
FEEI – Association of the Austrian Electrical and Electronics Industries	Zumtobel brand	Austria	1973
ZVEI Central Association of the German Electrical and Electronics Industry – Light/licht.de	Zumtobel and Tridonic brands	Germany	1968 and 1995
Belysningsbranschen	Thorn and Zumtobel brands	Sweden	*
Agoria	Zumtobel brand	Belgium	*
Anfalum	Tridonic brand	Spain	*
Syndicat de L'Éclairage	Thorn and Zumtobel brands	France	*
LIF - Lighting Industry Federation (LIF)	Zumtobel Group	UK	c. 1970 (founder member)
SLL – Society for Light and Lighting (SLL)	Thorn brand	UK	*
ANIE, ASSIL	Zumtobel and Tridonic brands	Italy	*
CIE – International Commission on Illumination	Zumtobel Group (Silver Sponsor)	Global	2008
LITG - Deutsche Lichttechnische Gesellschaft e.V.	Zumtobel and Tridonic brands	Germany	> 35 years
LTG - Lichttechnische Gesellschaft Österreichs	Thorn, Tridonic and Zumtobel brands	Austria	> 35 years
SLG – Schweizer Licht Gesellschaft	Zumtobel brand	Switzerland	*
CIBSE – Chartered Institution for Building Services Engineers	Thorn brand	UK	c. 1960
Ljuskultur	Thorn and Zumtobel brands	Sweden	*
AFE - L'Association française de l'éclairage	Thorn and Zumtobel brands	France	*
NSVV - Nederlandse Stichting voor Verlichtingskunde	Zumtobel brand	The Netherlands	*

Association	Membership via/as	Geographic coverage	Membership since
CEN – European Committee for Standardisation	DIN – Deutsches Institut für Normung, Austrian Standards Institute	Europe	Involvement of experts from the Group
DIN – Deutsches Institut für Normung	Experts from Zumtobel	Germany	*
Austrian Standards Institute	Experts from Zumtobel	Austria	*
BSI – British Standards Institute	Experts from Thorn	UK	*
AFNOR - Association française de normalisation	Experts from Thorn and Zumtobel	France	*
SIS – Swedish Standards Institute	Experts from Thorn and Zumtobel	Sweden	*
NBN - Bureau de Normalisation/ Bureau voor Normalisatie	Experts from Zumtobel	Belgium	*
NEN - Nederlands Normalisatie-instituut	Experts from Zumtobel	The Netherlands	*
UNI - Ente Nazionale Italiano di Unificazione	Experts from Zumtobel	Italy	*
DKE – Deutsches Elektrotechnisches Komittee	Experts from Zumtobel	Germany	*
Standards Australia	Experts from Thorn and Zumtobel	Australia/ New Zealand	*
DGNB - German Sustainable Building Council	ZVEI	Germany	2009
Global Compact	Tridonic	Australia/ New Zealand	2006
IEA – International Energy Agency	Experts from Zumtobel	Global	2002
IEC – International Electrotechnical Commission	Zumtobel Group	Global	*
ILE – Institute of Lighting Engineers	Thorn und Tridonic brands	UK	*
ISO – International Standards Organisation	Experts from Thorn and Zumtobel	Global	*
Klima:aktiv in Österreich	Zumtobel Group	Austria	2006
Minergie Verein	Zumtobel brands	Switzerland	2004
PLDA – Professional Lighting Designers Association	Zumtobel Group	Global	2010

*Can no longer be determined

9.6. Chronicle of sustainability

Sustainability in the Zumtobel Group – from the early days to the present

1928: Jules Thorn founds the Electric Lamp Service Company

1940: Thorn introduces fluorescent tubes – at the time a more energy-efficient form of lighting – which are mass-produced from 1948 onwards

1950: Dr. Walter Zumtobel founds Elektrogeräte und Kunstharzpresswerk W. Zumtobel KG in Dornbirn, Austria

1959: Zumtobel opens its first lighting laboratory in Dornbirn (See "Research and development")

Ab 60er Jahre: From the 1960s onwards: individual initiatives in the paintshop operations, waste separation/recycling, heat recovery and exhaust air purification (continuing uninterrupted through to the present day)

1978: The first electronic ballast (extending luminaire lifespan and saving energy)

1980: Launch of the first Zumtobel luminaire range with indirect and direct light – a global innovation offering an advance in light quality

1981: Thorn presents its first electronic ballast at the Hannover trade fair

1984: Launch of Cophos lighting design software, which subsequently becomes the industry standard

1989: Environment and waste officers appointed at the Dornbirn plant**

1990: Thorn introduces Sensa, the world's first independent and intelligent lighting concept for offices

1991: The first dimmable electronic ballast

1991: Zumtobel Licht GmbH (lighting solutions) and Tridonic Bauelemente (lighting components) GmbH become independent sub-groups

1991: Thorn introduces an environmental policy and goals, and publishes its first environmental report

1992/93: Integrated environmental and waste management concept for the Dornbirn plant**

1995/96: Zumtobel's cultural values are developed and introduced by Jürg Zumtobel

1996: First environmental training courses for employees at the Dornbirn plant**

1996: The Dornbirn plant is accredited under the Ökoprofit environmental performance scheme (annual audit + award) for the first time**

1997: Thorn's Landskrona plant achieves ISO 14001 certification

1999: LEDOS: the first mass-produced luminaire using LED technology

2000: Acquisition of Thorn

2001: The Group moves into LED technology, founding Tridonic Optoelectronics based in Jennersdorf, Austria

2003: Lean Six Sigma is introduced in the Components Segment

2004: "Champion": development of Thorn's first outdoor luminaire with light pollution control (see "Sustainable Products")

2004: Zumtobel joins the Partnering Against Corruption Initiative (PACI) and develops its Corporate Values to take account of the global market environment

2006: Initial public offering (listing on the Vienna Stock Exchange)

2006: Code of Conduct referring to the ILO's International Labour Standards

2008: Introduction of Thorn's "Greenliners" classification in the UK

2008: Lean Six Sigma introduced in the Lighting Segment

2008: The Innsbruck components plant is officially designated a "Sustainable Business" by the Austrian state of Tyrol as part of its "Nachhaltigkeitscheck" (Sustainability Check) scheme

2009: A Group-wide sustainability strategy is approved

2009: Zumtobel ranks among the ten most sustainable businesses in Austria (survey by Center for Corporate Citizenship Austria)

2009: Inclusion in Austria's Voenix sustainability index

2009: The Thorn brand produces a Sustainability Report

2009: Thorn and Tridonic open a new plant in Spennymoor

2009: "Areaflood": development of the latest generation of Thorn outdoor lights with light pollution control (see "Sustainable Products")

2010: Nine of the Zumtobel Group's 23 plants have achieved ISO 14001 certification

2010: The Zumtobel brand's Eco+ label is introduced at the Light + Building fair

2010: Thorn's Greenliner classification rolled out in Europe

2010: The Dornbirn plant is awarded the Ökoprofit label for the 14th successive year**

** Refers to the lighting and components plants in Dornbirn

10. GRI Index

In its sustainability reporting, the Zumtobel Group takes its lead from the internationally recognized G3 Guidelines of the Global Reporting Initiative (GRI).

These guidelines require the disclosure of information on management approach, strategy and goals in respect to sustainability, as well as of numerous performance indicators in the categories Economic, Product Responsibility, Labor Practices, Environmental, Society and Human Rights. Gearing reporting to these guidelines boosts transparency and renders the Group's sustainability performance comparable with that of other companies. Further information can be found on the Global Reporting Initiative website at www.globalreporting.org.

By its own assessment, the Zumtobel Group attains Level C with regard to the application of GRI's G3 Guidelines.

Key

light grey	Indicators marked in light grey are additional indicators where reporting is optional.

Cross references:

24, 38	Page numbers refer to information in the current Zumtobel Group Sustainability Report.
R profile	Report Profile
F/F	Facts and Figures
FAR	Further information can be found in the Zumtobel Group's current Financial and Annual Reports.
CGR	Further information can be found in the Zumtobel Group's current Corporate Governance Report.
n. r.	This indicator is not relevant to the Zumtobel Group.

Level of reporting:

• • •	This indicator is reported in full
• •	This indicator is partly reported
•	This indicator is not currently reported

Organisation and Report Profile

1. Strategy and Analysis		Comments	Level of reporting	Reference
1.1	Statement from the most senior decision-maker of the organization about the relevance of sustainability		• • •	Foreword
1.2	Description of key impacts, risks and opportunities		• • •	Chap. 2

2. Organizational profile		Comments	Level of reporting	Reference
2.1	Name of the organization		• • •	Chap. 1, FAR, www
2.2	Primary brands, products and/or services		• • •	Chap. 1, FAR, www
2.3	Operational structure of the organization		• • •	Chap. 1, FAR, www
2.4	Location of the organization's headquarters		• • • •	Chap. 1, FAR, www
2.5	Countries where the organization operates		• • •	Chap. 1, FAR, www
2.6	Nature of ownership and legal form		• • •	Chap. 1, FAR, www
2.7	Markets served		• • •	Chap. 1, FAR, www
2.8	Scale of the organization		• • •	Chap. 1, FAR
2.9	Significant changes during the reporting period regarding size, structure, or ownership			Chap. 1, FAR, www
2.10	Awards		• • •	Chap. 1

3. Report Parameters		Comments	Level of reporting	Reference
3.1	Reporting period		• • •	R profile
3.2	Date of most recent previous report	This is the first Sustainability Report of the Zumtobel Group as a whole.	• • •	
3.3	Reporting cycle		• • •	R profile
3.4	Contact point for questions regarding the report		• • •	Masthead
3.5	Process for defining report content		• • •	R profile
3.6	Boundary of the report		• • •	R profile
3.7	Specific limitations on the scope or boundary of the report		• • •	R profile
3.8	Basis for reporting on joint ventures		• • •	R profile
3.9	Data measurement techniques and basis for calculations		• • •	R profile

3.10	Explanation of the effect of any re-statements of information	Not relevant as this is the first Sustainability Report of the Zumtobel Group as a whole.	n.r.	
3.11	Significant changes from previous reporting periods in the scope, boundary or measurement methods applied	Not relevant as this is the first Sustainability Report of the Zumtobel Group as a whole.	n.r.	
3.12	GRI content index		• • •	GRI-Index
3.13	External assurance for the report	There is no external assurance of the report.	• • •	

4. Corporate Governance, Commitments and Engagement		Comments	Level of reporting	Reference
4.1	Governance structure of the organisation		• • •	FAR, CGR
4.2	Indicate whether the Chair of the highest governance body is also an executive officer		• • •	FAR, CGR
4.3	The number of members of the highest governance body that are independent		• • •	FAR, CGR
4.4	Mechanisms for shareholders and employees to provide recommendations to the highest governance body	The legal requirements are met.	• • •	
4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives and the organisation's performance		• • •	FAR, CGR
4.6	Processes to ensure conflicts of interest are avoided		• • •	Chap. 1
4.7	Process for determining the qualifications of members of the highest governance body for guiding the organisation's strategy on economic, environmental, and social topics		• •	FAR, CGR
4.8	Value statements, codes of conduct, and principles relevant to sustainability performance		• • •	Chap. 2
4.9	Procedures of the highest governance body for overseeing the organization's sustainability performance	No oversight procedures take place.	• • •	
4.10	Processes for evaluating the highest governance body's own sustainability performance	No evaluation procedures take place.	• • •	
4.11	How the precautionary principle is addressed by the organisation		• • •	Chap. 2/3/4
4.12	Externally developed sustainability charters, principles to which the organisation subscribes		• • •	Chap. 1/2

4.13	Memberships in associations and advocacy organisations	• • •	F/F, Chap. 2
4.14	List of stakeholder groups engaged by the organisation	• • •	Chap. 2
4.15	Basis for identification and selection of stakeholders	• • •	Chap. 2
4.16	Approaches to stakeholder engagement		Chap. 2
4.17	Topics raised through stakeholder dialog	• • •	Chap. 2

Management Approach and Performance Indicators

Economic Performance Indicators		Comments	Level of reporting	Reference
Management Approach, Economic			• • •	Chap. 1, FAR
EC 1	Direct economic alue generated and distributed		•	F/F, FAR
EC 2	Financial implications and other risks and opportunities for the organization's activities due to climate change		• • •	
EC 3	Coverage of the organization's defined benefit plan obligations		• • •	FAR
EC 4	Significant financial assistance received from government			F/F
EC 5	Range of ratios of standard entry level wage compared to local minimum wage	The Zumtobel Group always pays at least the wages agreed by collective bargaining.	• • •	
EC 6	Policy, practices, and proportion of spending on locally-based suppliers		• •	Chap. 7
EC 7	Procedures for local hiring and proportion of senior management from the local community		• •	Chap. 6, F/F
EC 8	Infrastructure investments and services provided primarily for public benefit		•	
EC 9	Describing significant indirect economic impacts,		• •	Chap. 1

Environmental Performance Indicators		Comments	Level of reporting	Reference
Management Approach, Environmental			• • •	Chap. 5
EN 1	Materials used		• • •	Chap. 5
EN 2	Materials used that are recycled input materials		• •	
EN 3	Direct energy consumption		•	Chap. 5, F/F
EN 4	Indirect energy consumption		• • •	Chap. 5, F/F
EN 5	Energy saved		• •	Chap. 5
EN 6	Initiatives to provide energy-efficient or renewable energy based products and services		• • •	Chap. 3/4

EN 7	Initiatives to reduce indirect energy consumption		•	
EN 8	Total water withdrawal		• • •	Chap. 5, F/F
EN 9	Water sources significantly affected by withdrawal of water		•	
EN 10	Percentage and total volume of water recycled and reused	No industrial water is recycled.	• • •	
EN 11	Land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value	No risk results from operations.	• • •	
EN 12	Impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity	No risk results from operations.	• • •	
EN 13	Habitats protected or restored	No risk results from operations.	• • •	
EN 14	Measures for managing impacts on biodiversity	No risk results from operations.	• • •	
EN 15	Endangered species in areas affected by operations	No risk results from operations.	• • •	
EN 16	Direct and indirect greenhouse gas emissions		• • •	F/F
EN 17	Other relevant indirect greenhouse gas emissions	No other relevant greenhouse gas emissions have been defined.	•	
EN 18	Initiatives to reduce greenhouse gas emissions		• • •	Chap. 5
EN 19	Emissions of ozone-depleting substances	Conversion of the production process has led to reduction of these emissions to an insignificant level.	• •	Chap. 5
EN 20	NOx, SOx, and other significant air emissions	Only occur within the limits of the currently applicable clean air legislation.	• •	
EN 21	Total water discharge		• • •	F/F
EN 22	Weight of waste by type and disposal method		• • •	F/F
EN 23	Number and volume of significant spills	There were no significant incidents in the reporting period.	• • •	
EN 24	Weight of transported, imported, exported, or treated waste deemed hazardous	Hazardous waste is disposed of properly and professionally by an authorised local waste disposal operator.	• • •	
EN 25	Water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff	There were no significant incidents in the reporting period.	• • •	
EN 26	Initiatives to mitigate environmental impacts of products and services		• • •	Chap. 4
EN 27	Percentage of products sold and their packaging materials that are reclaimed		• • •	Chap. 4
EN 28	Significant fines and sanctions for noncompliance with environmental laws and regulations	There were no significant incidents in the reporting period.	• • •	
EN 29	Environmental impacts of transport activities	Transport is handled by an external service provider.	•	
EN 30	Total environmental protection expenditures	Total expenditures are not currently recorded across the Group.	•	

Labor Practices and Decent Work Performance Indicators		Comments	Level of reporting	Reference
Management Approach, Labor Practices			• • •	Chap. 6
LA 1	Total workforce by employment type, employment contract and region		• • •	Chap. 6, F/F
LA 2	Total number and rate of employee turnover		•	
LA 3	Benefits provided to full-time employees only		•	
LA 4	Percentage of employees covered by collective bargaining agreements	All employees are employed in accordance with the legal provisions. Wherever collective bargaining agreements are provided for, these are applied.	• •	
LA 5	Minimum notice period(s) regarding operational changes	The legal requirements are met.	• • •	
LA 6	Percentage of total workforce represented in management–worker health and safety committees	The legal requirements are met.	• • •	
LA 7	Injuries, occupational diseases, lost days and absenteeism		• • •	Chap. 6, F/F
LA 8	Education, training, counseling, prevention, and risk-control programs regarding serious diseases		• • •	Chap. 6
LA 9	Health and safety agreements with trade unions		•	
LA10	Average hours of training per year per employee		• • •	Chap. 6, F/F
LA 11	Programs for skills management and lifelong learning		• • •	Chap. 6
LA 12	Percentage of employees receiving regular performance and career development reviews		• • •	Chap.6
LA 13	Diversity in the workforce and governance bodies		• •	Chap. 6, F/F
LA 14	Ratio of basic salary of men to women	At the Zumtobel Group and its brands, salaries are governed by the duties performed and not by gender.	• • •	

Human Rights Performance Indicators		Comments	Level of reporting	Reference
Management Approach, Human Rights			• • •	Chap. 2/7
HR 1	Investment agreements that include human rights clauses		•	
HR 2	Suppliers and contractors that have undergone screening on human rights		• •	Chap. 7
HR 3	Employee training on aspects of human rights		•	
HR 4	Total number of incidents of discrimination and actions taken	An ethics hotline has been in place since 2006. To-date no incidents have been reported.	• • •	
HR 5	Operations identified in which the right to exercise freedom of association and collective bargaining may be at risk		• •	Chap. 2/7
HR 6	Operations identified as having significant risk for incidents of child labor		• •	Chap. 2/7
HR 7	Operations identified as having significant risk for incidents of forced or compulsory labor		• •	Chap. 2/7
HR 8	Security personnel trained in aspects of human rights		•	
HR 9	Incidents of violations of the rights of indigenous people	No risks ensue from the operations of the Zumtobel Group and its brands.	• • •	

Society Performance Indicators		Comments	Level of reporting	Reference
Management Approach, Society			• • •	
SO1	Programs and practices that assess and manage the impacts of operations on communities		•	Chap. 1/2
SO 2	Business units analyzed for risks related to corruption	Within the scope of the institutionalised and regular risk assessement process, risks are identified and evaluated at almost all European plants as well as in the USA and in some cases in China. The risks identified are subject to regular monitoring by Corporate Audit and Corporate Controlling.	• • •	
SO 3	Employees trained in anti-corruption policies/procedures		•	
SO 4	Actions taken in response to incidents of corruption		•	
SO 5	Participation in public policy development and lobbying		• • •	Chap. 3
SO 6	Contributions to political parties and politicians	As a matter of principle, the company does not make donations to politicians and/or political parties.	• • •	
SO 7	Number of legal actions for anticompetitive behavior		•	
SO 8	Fines and sanctions for noncompliance with laws and regulations		•	

Product Responsibility Performance Indicators		Comments	Level of reporting	Reference
Management Approach, Product Responsibility			• • •	Chap. 4
PR 1	Life cycle stages in which health and safety impacts of products and services are assessed	The legal requirements are met.	• • •	Chap. 4/5
PR 2	Incidents of non-compliance with concerning health and safety impacts of products and services		•	
PR 3	Product and service information required by procedures		• • •	Chap. 4
PR 4	Incidents of non-compliance with regulations concerning product and service information and labeling		•	
PR 5	Practices related to customer satisfaction		• • •	Chap. 4
PR 6	Adherence to laws, standards, and voluntary codes related to advertising	Not relevant, as no business-to-consumer advertising is conducted.	n.r.	
PR 7	Incidents of non-compliance with regulations and voluntary codes concerning advertising	Not relevant, as no business-to-consumer advertising is conducted.	n.r.	
PR 8	Substantiated complaints regarding breaches of customer privacy and losses of customer data		•	
PR 9	Fines for noncompliance with laws and regulations concerning the provision and use of products		•	

Quality of light also includes quality darkness. Effective street and architectural lighting helps us see the stars more clearly.

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