

TAKING SUSTAINABILITY FURTHER

CREATING LIGHT CREATES TIMELESSNESS

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If we are to be truly sustainable, we need to take a holistic approach.

A truly sustainable product begins with a timeless design and ends with the reusability of all its parts.

A truly sustainable building not only consumes a small amount of energy while it is in use, but also has a timeless design.

This means that the building is equipped for flexible use and is understood and managed as a valuable ecosystem.

Truly sustainable buildings are those that people will enjoy using for decades to come.

With our sustainable lighting solutions, we are contributing to making buildings truly sustainable.



HUMAN CENTRIC. NETWORKED. SUSTAINABLE.

Climate change. Resource scarcity. Disruption.
We are living in a world in flux. In the face of global challenges, here at Zumtobel we are asking how we – as the leading producer of innovative lighting solutions, lighting components and related services – can grow in a sustainable way. What type of lighting will enable our customers to use light in a way that is human centric, networked and sustainable?

Zumtobel lighting solutions help create buildings that people will want to spend time in for many decades to come, thanks to our integrated approach to light. We design lighting solutions that not only offer maximum energy efficiency and contribute to decarbonisation during the usage phase, but are also characterised by timeless design, future-proof technology and components that can easily be reused – because the products of today are the raw materials of tomorrow. In this sense, a sustainable building always has an additional function as a temporary storage facility for the resources of future generations.

We monitor the working and environmental conditions of our suppliers and create greater transparency along our supply chains. In doing so, we accumulate knowledge that goes far beyond the legal requirements in order to best support our customers' sustainability goals. Sustainable architecture enables the flexible use of space and adapts to the needs of its users. The same is true for Zumtobel lighting solutions. Using "Active Light" and "connected architecture", we adapt lighting technology and the building infrastructure behind it first and foremost to people and their senses, creating dynamic solutions for flexible, future-proof living spaces. Static buildings become learning ecosystems that optimise resource consumption while also anticipating future applications.

We believe that human sustainability is a core value of our time and one that also contributes significantly to increasing a building's value. Stakeholders throughout the entire building life cycle benefit from the clear economic and environmental advantages of a sustainable lighting concept: tenants and building users can save on energy used for lighting and implement smart room solutions using the state-of-the-art lighting infrastructure, while operators and custodians can successfully market, rent or sell future-proof buildings with energy efficiency certifications. Sustainable light is the key to a future-oriented, profitable real estate strategy.



SUSTAINABILITY AND SOCIAL RESPONSIBILITY AS KEY FACTORS

As the Zumtobel brand, we support the sustainability strategy adopted by our parent company. The Zumtobel Group aims to achieve climate neutrality by 2025 (scope 1 and 2 according to the Greenhouse Gas Protocol). We also help our business partners to achieve their climate goals. The foundation of our entire portfolio and all our activities lies in these objectives.

THE CIRCULAR ECONOMY AS A CORNERSTONE OF OUR STRATEGY

What makes the Zumtobel Group your ideal partner? The fact that people work with us out of a conviction in what we do: with sustainable supply chains, optimal working conditions, innovative power and services. In line with the circular economy goals established by our company, as a brand we are putting everything we have into extending the life of our products. Conversion kits represent an initial key milestone in the circular economy-based business model adopted by our brand. We are developing these as a standard or special solution to assist with converting to LED as a result of the ban on light bulbs that is due to come into force in 2023. This means that we have already been able to close a small loop in the cycle (maintenance upgrade). It also means that valuable resources in the luminaire components can continue to be used.

ECOVADIS GOLD

At a company level, the Zumtobel Group has been awarded a gold medal for its achievements by the EcoVadis sustainability rating agency. This means that the Group belongs to the top three percent of over 75 000 companies evaluated.

SUSTAINABILITY AS A STRATEGIC COMPANY DECISION

In all of these aims and activities, we never see sustainability as an end in itself. It is not simply a marketing tool that helps us sell our lighting solutions. Rather, it is a foundational premise according to which we at Zumtobel make all strategic and operational business decisions, as part of the wider corporate strategy of the Zumtobel Group. In order to achieve this aspiration at the market level, we at Zumtobel are committed to the objective of human sustainability, which stems from the needs of human beings and their architectural environment.

ENVIRONMENTAL GOALS 2022/2023

2025	Climate neutrality aimed for
91%	Rate of recycling of internal waste
57%	Proportion of renewable energies up to business year 2022/23
10%	Reduction in CO ₂ emissions compared to business year 2021/22



Gold medal for sustainability performance



Zumtobel Group sustainability report



HUMAN SUSTAINABILITY THROUGH ACTIVE LIGHT AND CONNECTED ARCHITECTURE

#01 ACTIVE LIGHT – FOCUS ON PEOPLE

Our Active Light concept adapts Zumtobel luminaires and solutions to people's needs. Dynamic applications and new technologies allow us to achieve a quality of light that is inspired by natural daylight and therefore also sustainable.

#02 CONNECTED ARCHITECTURE – VALUE CREATION FOR A STRONG FUTURE

“Connected architecture” enables us to use building technology as a basis with which to transform a building into a learning ecosystem, thereby increasing its value and ensuring its long-term profitable and sustainable operation, but without losing sight of users' needs in the process.

#03 HUMAN SUSTAINABILITY – BUILDINGS FOR FUTURE GENERATIONS

Human sustainability is based on the concepts of “Active Light” and “connected architecture”. At Zumtobel, our aim is the long-term conservation of natural resources – for the benefit of people, animals, plants and the whole planet. To achieve this, we not only focus on resource consumption during the usage phase, but also on reducing it before and during the construction phase. A sustainable building also has an additional function as a temporary storage facility for the resources of future generations.

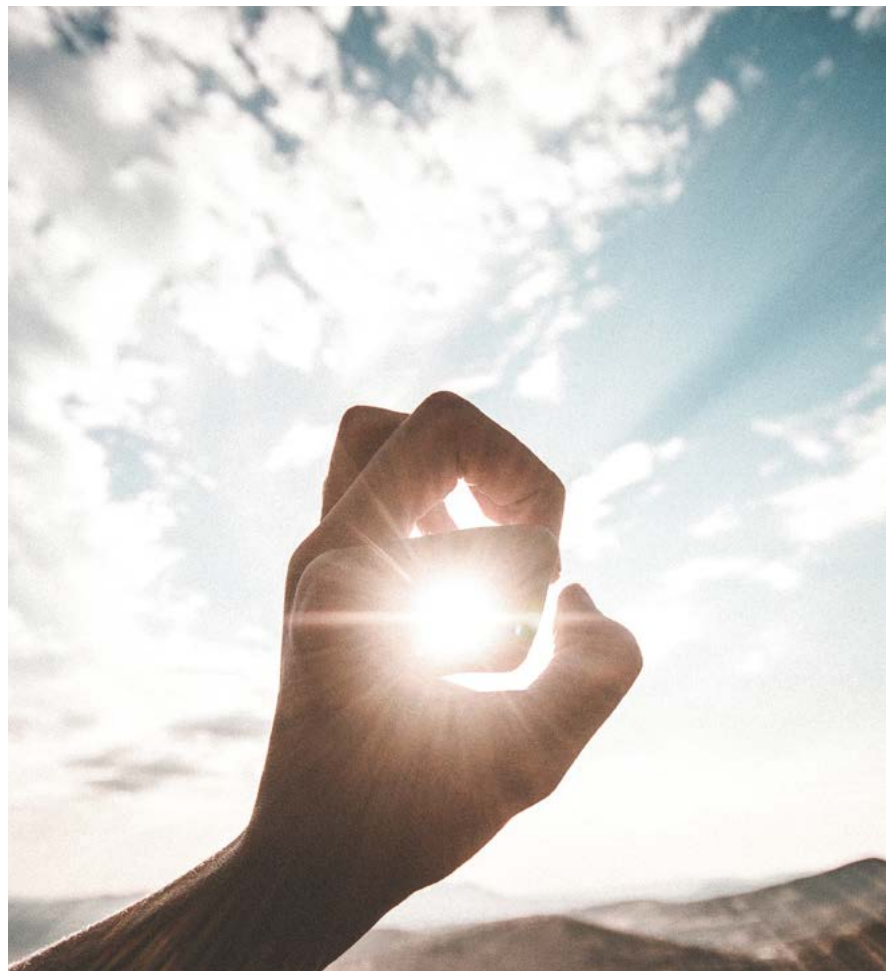
#01 ACTIVE LIGHT – FOCUS ON PEOPLE

Light means life.

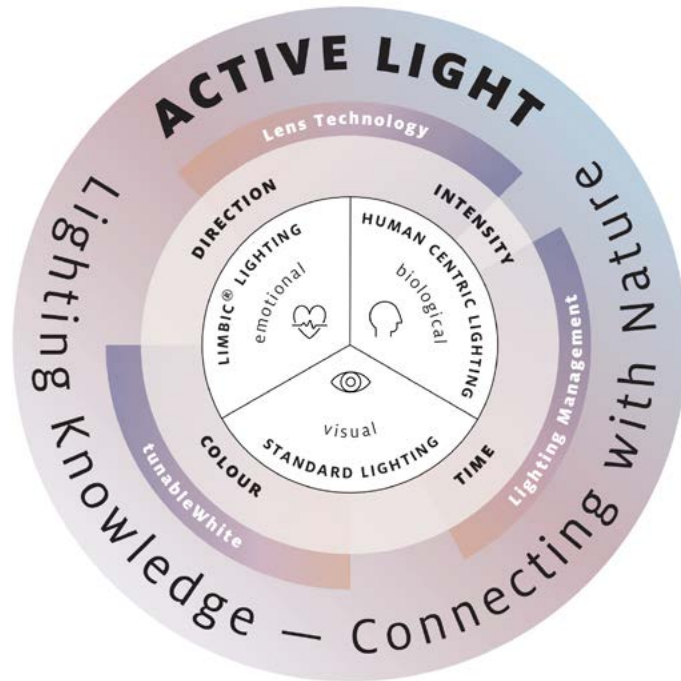
It doesn't just provide the means for people to be able to see with acuity, but affects people in every aspect of their lives.

High-quality light based on daylight underpins our emotions, inspires our imagination, boosts our ability to concentrate and supports our regeneration. Human centric light, at any time and in any space, lays the foundation for all-round light quality for many years to come, while making it possible to create sustainable buildings that will last into the future.

Our Active Light concept adapts Zumtobel luminaires and solutions to people's needs. Dynamic applications and new technologies allow us to achieve a quality of light that is inspired by natural daylight and therefore also sustainable.



#01 ACTIVE LIGHT – FOCUS ON PEOPLE



Light is a central feature of human-centric architecture: it not only supports us with our everyday and occupational visual tasks, but also has a direct effect on our emotions. Light can also support human beings' natural biorhythm and improve our sleep quality, attention and motivation. All three components – the visual, emotional and biological effects of light – therefore make a direct contribution to people's physical and mental health. Active Light is the name of our holistic approach to light quality here at Zumtobel. To sum this up, light contributes to a living space that is tailored to the needs of human beings and that provides people with positive support over the long term: the best conditions for long-lasting use.

MODELLED ON DAYLIGHT

An ideal, energy-efficient lighting solution is always created using natural light as a point of reference. Daylight is biologically effective, changes according to the rhythm of nature, provides high light intensities and is freely available at many times of day. In specific terms, this means that we let daylight take centre stage in everything we do. By using the available light in an optimal way, we don't just conserve limited resources – we also increase the quality of the light that derives from the dynamism and diversity of nature. We blend artificial light and technology subtly into the background, putting the focus on the natural living environment. Depending on the time of day, the season or the weather, with Active Light we adjust artificial light to meet human beings' most essential needs, using nature as our guide and thereby providing the optimal visual, emotional and biological support.

To do so, we use and develop new technologies and dynamic, digital solutions. Using the building infrastructure as a starting point, we create an Internet of Things (IoT), which controls the lighting depending on requirements. This results in lighting that is not just human centric, but that also responds to environmental and economical concerns in a harmonious way. After all, people who are alert, well rested and motivated also perform at a higher level and are more productive in the long term.



Active Light

#01 ACTIVE LIGHT – FOCUS ON PEOPLE



TUNABLEWHITE AND SPECTRUM: BUILDING BLOCKS FOR TECHNOLOGY

TunableWhite and Zumtobel SPECTRUM are key technological building blocks for achieving holistic objectives with Active Light. By providing the right colour temperature and the right light intensity at the right time, tunableWhite supports people's physiological functions and brain activity. Warm light in the early morning and evening supports well-being and relaxation, while bluish light in the late morning and around midday has a stimulating effect. This supports the circadian rhythm in interior spaces in a positive way, improving fitness and performance during waking phases.



tunableWhite

#01 ACTIVE LIGHT – FOCUS ON PEOPLE

Zumtobel SPECTRUM technology also facilitates optimal well-being and maximum concentration: it can imitate natural light in an unprecedented way and reduces the intensity of blue wavelengths for this purpose. The pupils constrict, and visual acuity is improved. Compared to conventional LEDs, this spectral distribution has a pleasant, neutral white light colour and makes an ideal contribution to the melanopic system and therefore to physiological processes. Whether for focussed desk-based work or communication, Zumtobel SPECTRUM ensures good sensory functioning and concentrated work. Information workers and students are optimally supported with their frequently challenging on-screen visual tasks.



Zumtobel SPECTRUM



#01 ACTIVE LIGHT – FOCUS ON PEOPLE



MAKING THE BIOLOGICAL EFFECTS OF LIGHT EASY TO PLAN

Because the biological effectiveness of light is also playing an increasingly important role in the planning process, Zumtobel now provides “melanopic data sheets”. Lighting designers and customers can use these to calculate the non-visual effects of light with reference to current standards (CIE S 026/E:2018, DIN SPEC 5031-100, DIN SPEC 67600 and the WELL Building Standard) for a specific project. Thanks to the transparency of this information, lighting concepts can be prepared in an even more precise and sustainable way.



Melanopic data sheet (example)



ACTIVE LIGHT FOR EVERY REGION OF THE WORLD

The concept of “Human Centric Lighting” is inclusive rather than exclusive: Zumtobel is playing its part in ensuring that Active Light is not the preserve of economically successful workplaces and dwellings in privileged parts of the world. We are working on finding lighting solutions in less advantaged regions of the globe. An example of this is our collaboration with Prof. Hubert Klumpner, Professor of Architecture and Urban Design at ETH Zürich’s Department of Architecture. His research focusses on the design of informal urban spaces (“shanty towns”) from a humanitarian and creative perspective.



Supported dissertation at ETH Zürich

#01 ACTIVE LIGHT – FOCUS ON PEOPLE



LIGHTING THE GLOBAL WORKSPACE

For “Lighting the Global Workspace”, we collaborated with the AEDES Network Campus Berlin (ANCB) to illustrate how important individual lighting concepts are for information workers around the world. As part of this project, offices in Medellín, Lagos, Berlin, Manila and Sydney were analysed in order to understand their specific contexts and potential for innovation. Lighting plays a significant part in creating a positive company culture and identity that is quite literally a beacon of light.



“Lighting the Global Workspace”



AN IMMERSIVE EXPERIENCE: BECOMING ONE WITH ART

Projects in the art and culture sector are one of Zumtobel’s specialist application areas. From Kunsthaus Zürich and the Guggenheim Museum in Bilbao to the Städel Museum in Frankfurt: at the heart of all our lighting concepts is people’s need to immerse themselves on an individual level in the world of the artists and art objects in museum spaces. Zumtobel’s engagement at the intersection between light, architecture, art and photography, which forms a key part of the history of the brand, is also reflected in the artistic design of the annual Zumtobel Group business reports.



Zumtobel Group annual reports

#02 CONNECTED ARCHITECTURE – VALUE CREATION FOR A STRONG FUTURE

Light creates value:

and not just for sustainable companies, but also for their customers. From shops to schools, from museums to material stores, “connected architecture” and digital applications and services allow building data to be measured and therefore improved. Buildings become learning ecosystems that are continually being tailored a little more closely to people’s requirements and sensory experiences, while also conserving resources. Thanks to our sophisticated knowledge of specific applications, Zumtobel lighting solutions create real added value in every situation. This is light as a starting point for a better future.

“Connected architecture” enables us to use building technology as a basis with which to transform a building into a learning ecosystem, thereby increasing its value and ensuring its long-term profitable and sustainable operation, but without losing sight of users’ needs in the process.



#02 CONNECTED ARCHITECTURE – VALUE CREATION FOR A STRONG FUTURE

Zumtobel's success is not based solely on the sale of luminaires. In fact, we aim to create lighting solutions that deliver real added value for their respective area of application. Whether in industry, in the office, in educational establishments, shops or museums, our motto is always "application first". In practice, this means that we share our in-depth knowledge of light and its uses via many channels, helping to optimise work processes, increase building value, improve health and well-being and support successful outcomes.



Specialist application areas

CONNECTED BUILDINGS: SMART NOT STATIC

"Connected architecture" uses the lighting installation as the basis for smart building infrastructure. Luminaires are fitted with sensors that collect a variety of building and environmental data, including brightness, presence, temperature and air quality, and precisely analyse requirements. This data can be used to regulate environmental conditions, ensuring that energy is used efficiently and a pleasant atmosphere for users is created. Room quality is connected with all the senses – which has a direct effect on quality of life.

ARCHITECTURE – BETWEEN ECOLOGY AND ECONOMY

If a sky scanner measures a high level of sunlight, for example, a smart lighting management system will automatically lower the level of artificial light produced. A free-standing luminaire with sensors is close to the user and can instantaneously measure and optimise factors such as air quality or temperature.

What makes sense for the environment also makes economical sense: smart building technologies offer huge potential for saving on operating costs. Networking can go even further than that, however, and transform architecture into a learning ecosystem that continually improves as it adapts for ambitious sustainability goals and people's requirements in each environmental condition.

#02 CONNECTED ARCHITECTURE – VALUE CREATION FOR A STRONG FUTURE

DIGITAL SERVICES: ADDED VALUE FOR BUILDINGS AND THEIR USE

Building data is the perfect starting point for improving the customer and employee experience, optimising processes and saving time and resources. Zumtobel's Digital Services are integrated into the lighting infrastructure and allow data that has already been collected to be used to create added value. Across all sectors, these services transform big data into concrete business and usage models.

An example is Asset Tracking, which enables objects to be located quickly and efficiently in buildings. Its possible uses range from tracking goods shipments in the logistics sector, finding parts during a complex manufacturing process and tracing high-quality, mobile work equipment or vehicles to locating medical devices in hospitals.

Presence and movement data make space and desk management easier in offices and education: staff or students can view available workspaces with a dedicated app, while cleaning companies can get a reliable picture of areas that have been used and that need to be cleaned.

In retail, Digital Services allow the physical and digital shopping experience to be integrated in an intelligent way: customer relationship apps can create personalised offers on the basis of previous shopping preferences, while an in-shop navigation function guides customers to the products they are looking for on the shelves, and a heat map helps to evaluate which areas of the shop are particularly attractive.



#02 CONNECTED ARCHITECTURE – VALUE CREATION FOR A STRONG FUTURE

Building certifications such as LEED or BREEAM promote sustainable architecture, increase building value for operators and users and make it easier to compare standards at an international level. Connected buildings and services will soon be awarded multiple credits in the scoring systems for these different labels.



ADDED VALUE THROUGH SERVICES AND SMART CONSTRUCTION IN GREEN BUILDING

Various organisations evaluate resource-efficient construction methods according to their own weighted quality requirements. The sought-after Green Building certifications, which vary around the world, focus on the environment while also taking human needs into consideration. Operators and owners follow structured processes – from project design to construction, commissioning, maintenance, retrofitting and the reuse of materials. Digital Services map out interdependencies between many building services in analysing the collected data. Networking and services are therefore represented several times over in terms of how credits are allocated in the overall evaluation of a sustainably built building – and rightly so.

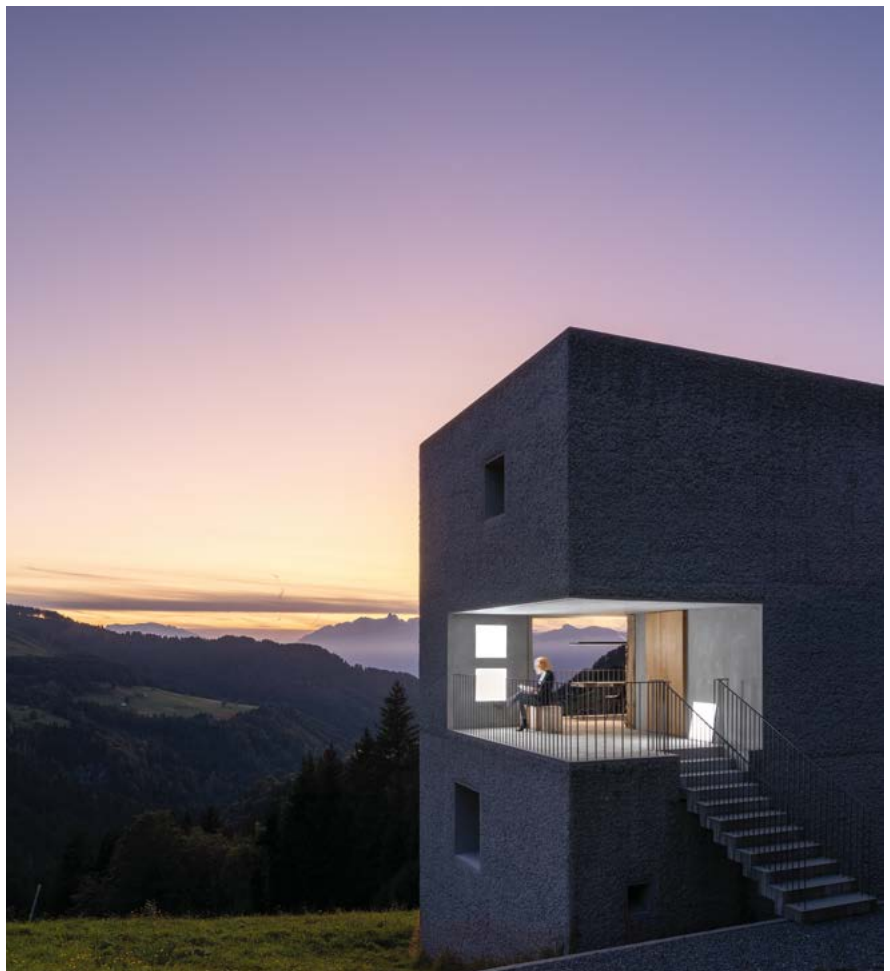
After all, lighting controls and data collection and analysis are key drivers of the ongoing optimisation of the connected building – both for people and for the environment. As a provider of holistic lighting solutions and services, Zumtobel is actively involved in the certification process for Green Building, not only through its services, but also as an active project partner offering advice, lighting design, controls for holistic light quality, commissioning and after sales. We thereby aim to increase building value for our partners, use light to permanently improve quality of life, and make a contribution to decarbonisation through light.

#03 HUMAN SUSTAINABILITY – BUILDINGS FOR FUTURE GENERATIONS

Human sustainability goes a step further than the basic principles of sustainability:

it focusses not just on resource efficiency, but also on striking a balance between protecting the environment and meeting human needs. Our goal is to make architecture usable for many generations to come, providing it with the ideal light. The way we understand human sustainability at Zumtobel is like this: only when buildings and residential areas are designed with humans in mind will people perceive them positively – and enjoy using and inhabiting them in the long term.

Human sustainability is based on the concepts of “Active Light” and “connected architecture”. At Zumtobel, our aim is the long-term conservation of natural resources – for the benefit of people, animals, plants and the whole planet. To achieve this, we not only focus on resource consumption during the usage phase, but also on reducing it during the construction phase. Environmentally sustainable, without neglecting the needs of building users.



#03 HUMAN SUSTAINABILITY – BUILDINGS FOR FUTURE GENERATIONS

Architecture, (lighting) technology and design retain their value best when they are timeless and durable.

As Werner Sobek, pioneer in sustainable engineering and design, said in his 17 theses in the Zumtobel Group's annual report in 2019, "It is wrong to focus on energy efficiency only during the utilisation phase." After all, if we look at a building constructed today, around 50 percent of its emissions over the next 60 years will occur before it is even occupied.

That's why sustainability also involves the long-term use of these valuable resources: raw materials must be extracted, and building materials or entire components must be produced, delivered and installed.

FROM GREEN TO BLUE ECOLOGY

The current change from a green to a blue ecology, which encompasses lighting innovations, also plays an important role here.

Blue ecology focusses on abundance or intelligent waste: by using innovative technologies and research, we can tap into new resources and sources of energy. Brand new high-tech materials are being created that make use of nature without harming it. As a result, traditional, unsustainable approaches become obsolete. "What can I do without?" is the key question for this school of thought, which believes in the vitality and creativity of an inventive high-tech ecology.



THESIS 05:

“It is wrong to focus on energy efficiency only during the utilisation phase. Calls for energy efficiency during a building’s utilisation phase are actually aimed at reducing the associated emissions. However, the ultimate objective is zero emissions, and this should be clearly stated. We should be clear about this. In fact, operating the building is only part of the problem. Global construction must shift the focus of its efforts and prioritise a dramatic reduction in embodied emissions.”



#03 HUMAN SUSTAINABILITY
– BUILDINGS FOR
FUTURE GENERATIONS



#03 HUMAN SUSTAINABILITY – BUILDINGS FOR FUTURE GENERATIONS

SUSTAINABLE CONSTRUCTION IN VORARLBERG

The state of Vorarlberg in Austria is committed to achieving ambitious sustainability goals – and is an important part of the history of the Zumtobel brand. This region is known across Europe for its exemplary and sustainable construction that uses ecological materials and unites modern and traditional architecture. Zumtobel works closely with the local architectural and craft sectors. Armed with the resulting knowledge, and with an awareness of its responsibility for the environment and for future generations, Zumtobel has set itself the goal of creating the best light for people and architecture.



The energy balance for Hermann Kaufmann's LifeCycle Tower ONE was improved by 90%. New benchmarks for modular hybrid construction, sustainability, the efficient use of resources, and quality of living were set in Dornbirn ten years ago – with what was then the first eight-storey wooden building in Austria. With lighting by Zumtobel.

#03 HUMAN SUSTAINABILITY – BUILDINGS FOR FUTURE GENERATIONS

ZUMTOBEL GROUP AWARD: OUTSTANDING INNOVATIONS

In addition to our own activities, the company also supports other forward-looking developments that improve quality of life and sustainability in the built environment. The Zumtobel Group Award was established in 2007 and recognises architectural projects that work with scarce resources in a conscientious way, support decarbonisation or investigate potential new ways of using existing buildings. Other categories are dedicated to sustainable development concepts in urban and rural areas and to the use of new materials and innovative processes. Human Sustainability should be visible in all its complexity – and the Zumtobel Group Award plays a part in this.



Zumtobel Group Award



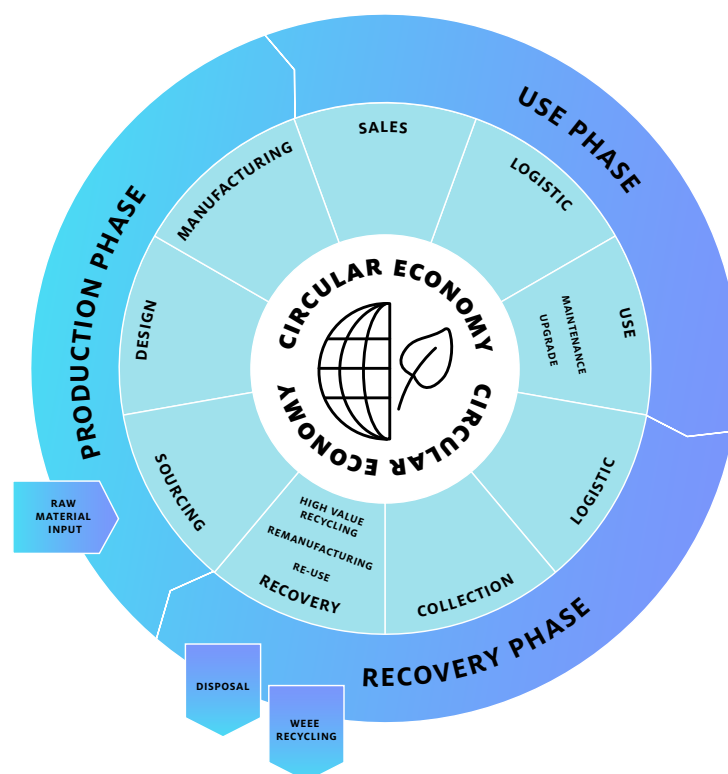
“The Zumtobel Group Award places human beings at the heart of the built environment. Architecture shapes urban situations and spaces. With its lighting solutions, Zumtobel makes a significant contribution to how people experience and live in these places.”

– Isabel Zumtobel,
Head of Art & Culture, Zumtobel Group

#03 HUMAN SUSTAINABILITY – BUILDINGS FOR FUTURE GENERATIONS

Growing with the available resources.

The circular economy unites economic growth with the idea that using non-renewable natural resources should be avoided. Products are constructed so that they can be disassembled into separate raw materials again. The end of a product's life is also a new beginning.



THE CIRCULAR ECONOMY: BUILDINGS AS A STORE OF RAW MATERIALS FOR THE LIGHT OF THE NEXT GENERATION

The greatest leverage for new opportunities in sustainable light lies in viewing buildings not as objects that will gradually be used up, despite the fact that they wear over time, but as valuable ecosystems and stores of raw materials for future generations. High quality and durability and good, non-harmful materials that contribute to the ideal room climate are characteristic of the architecture of a sustainable future. Zumtobel's contribution to the circular economy is our timeless designs with features that facilitate convenient maintenance, repair and modernisation in the smallest maintenance/upgrade cycle. As the final step, we ensure that our luminaire

components can be disassembled, separated and reprocessed and that the materials are easily recyclable. These steps are connected with corresponding systems, or an infrastructure for the material cycle. In this way, we make a daily contribution to transforming buildings into temporary stores for valuable raw materials again and again – raw materials that are intended to be used for as long as possible and to be available for future generations.

#03 HUMAN SUSTAINABILITY – BUILDINGS FOR FUTURE GENERATIONS

SOLUTIONS FOR THE CIRCULAR ECONOMY

While the construction and early usage phase of a building is primarily about saving energy and reducing CO₂ emissions (Reduce), being able to flexibly repurpose, redesign or renovate existing spaces becomes particularly important in the second phase of the building life cycle (Reuse + Recycle).

Conversion kits for retrofitting

This flexibility is currently required for renovations needed due to the discontinuation of fluorescent and halogen lights within the EU by 2023, which stipulates a switch to more sustainable LED luminaires. For refurbishment projects in particular, Zumtobel offers lean solutions that achieve maximum added value with minimum effort: using conversion kits as special or standard solutions, for SLOTLIGHT, PANOS, ONDARIA and pendant luminaires such as CLARIS for example, a key loop in the maintenance/upgrade cycle of the circular economy can be closed.

Advantages of the conversion kits

Instead of replacing the entire luminaire, the conversion kits mean that only parts need to be renewed or replaced. This has many advantages: existing resources remain in use in the long term. This promotes decarbonisation – and reduces costs. Because there's no need to invest in an entire new luminaire. The customer is also spared extensive renovation measures on the building because in many cases the ceiling does not have to be changed or damaged. The product stays on site and moves into a second phase of use. This renewal process helps to improve the quality of light and reduce CO₂ emissions.

A look to the future

Zumtobel is already thinking ahead when it comes to the idea of the circular economy: more and more offers for taking back or reusing products are also being developed, such as with our partner Concular.

RESPONSIBILITY FOR PEOPLE AND MATERIALS

High-quality raw materials that are low in harmful substances are a key part of a functioning circular economy. Zumtobel luminaires represent material health. To ensure that Zumtobel is as sustainably positioned as possible, we are careful to purchase and use raw materials of the highest quality from the outset. Our suppliers are therefore selected, certified and audited according to strict criteria.

Local partners

In keeping with the principle of 'local-for-local sourcing', Zumtobel is also committed to developing independent supply chains in the immediate vicinity of its production and sales locations. This not only makes sense from an environmental point of view and supports decarbonisation, but also ensures that Zumtobel is less dependent on global supply chains, which have proven to be often unstable in the long run.

Sustainable packaging

To prevent waste, all Zumtobel luminaires are packaged in a way that provides optimal protection while using a minimal amount of cardboard and other materials. If deliveries are made to large construction sites, Zumtobel aims to avoid individually packaged items completely, for example. The use of bulk packaging is becoming increasingly focussed. This means that resources are protected and work processes on the construction site are made more efficient.



CONTROLS, SERVICES AND TOOLS FOR SUSTAINABLE LIGHT

Luminaires, controls and services

From A for “accent lighting” to Z for “zeitgeist”: Zumtobel is a single-source supplier of state-of-the-art lighting solutions. In addition to high-quality luminaires, our core business, we also offer a range of compatible control tools and systems. Dynamic light management technology that turns lighting into an experience. Artificial light that can be adapted to natural light as required, depending on the time of day or year, for maximum energy efficiency. Emergency lighting that performs reliably at all times and in any circumstances. Lighting infrastructure that supports not only the lighting, but also the digitalisation of the whole building.

Added to all this is Zumtobel’s extensive range of services: from initial drafts and planning tools to the right financing and on-time installation, we provide expert project management for turnkey lighting solutions from a single source, with no unexpected costs. Our in-house service team offers a wealth of in-depth knowledge and practical expertise – in many countries worldwide.

Even after commissioning, we ensure that existing building lighting solutions continue to function at the highest level for as long as possible, allowing them to play their part in creating not only an optimal user experience, but also a living space that can be used sustainably, in the best sense of the word, for generations to come. Our customer support continues right to the end of the product life cycle and also includes the recovery and recycling of valuable raw materials.

Light as a complete solution: we make sure you have the perfect light, so you can focus on your core business.



SERVICES AND TOOLS FOR SUSTAINABLE LIGHT



LIGHT AS A SERVICE

LaaS (Light as a Service) is an alternative to buying a lighting system. Instead of requiring a one-off investment, the new lighting system can be used subject to the payment of monthly light contracting instalments. A costly LED retrofit can thus be carried out quickly, usually without the need for greater investments. At the same time, a valuable and profitable contribution to sustainability is made, because, as well as reducing CO₂ emissions, immediate savings can also be made on electricity costs. Furthermore, a modern lighting infrastructure also creates the basis for smart, digital building management.



EPDS: ENSURING THAT ENVIRONMENTAL IMPACT CAN BE MEASURED AND PLANNED FOR BUILDING CERTIFICATIONS

As early as the 2010s, Zumtobel was one of the first luminaire manufacturers to make EPDs available to its market partners. An Environmental Product Declaration outlines the environmental impact of a product during its entire life cycle as part of the ecological building assessment in accordance with DIN EN 15978 ("Sustainability of construction works"). In-depth data compliant with ISO 14025 and EN 15804 serves as the basis for environmental certifications for sustainable building.



BUILDING CERTIFICATIONS

Various Green Building certifications enable the sustainability of buildings to be measured and compared, with BREEAM and LEED some of the best-known. Customers seek Green Building certifications in order to increase a property's value and marketability, reduce operating costs and provide evidence of the building's sustainability. We help our customers to obtain the desired Green Building certifications with intelligent lighting solutions and the relevant data (such as EPDs).



COST EFFICIENCY STUDY WITH ECOCALC

ecoCALC is Zumtobel's tool for analysing the costs of a lighting solution across its entire life time. To do this, ecoCALC not only calculates the investment costs, but also takes into account CO₂ emissions, power consumption, maintenance costs and system disposal. The software integrates the relevant EPDs and calculates the LENI (Lighting Energy Numeric Indicator), an important guide value for lighting efficiency in the energy assessment that must be provided for a sustainability certification. ecoCALC light is available as a browser-integrated, simplified solution.



LIGHTING DESIGN WITH BESTFIT

Our lighting design tool bestFIT helps our customers create a high-quality and standard-compliant lighting solution easily and in near real time. Users can simply enter the information they have – such as luminaire model, room dimensions or desired illuminance – into the bestFIT screen. In just a few clicks, they can then view the most suitable number of luminaires for their application as well as the optimal arrangement. In addition, users can see a calculation of energy costs by selecting the relevant service life. A fact-based comparison with other luminaires/systems is also available.

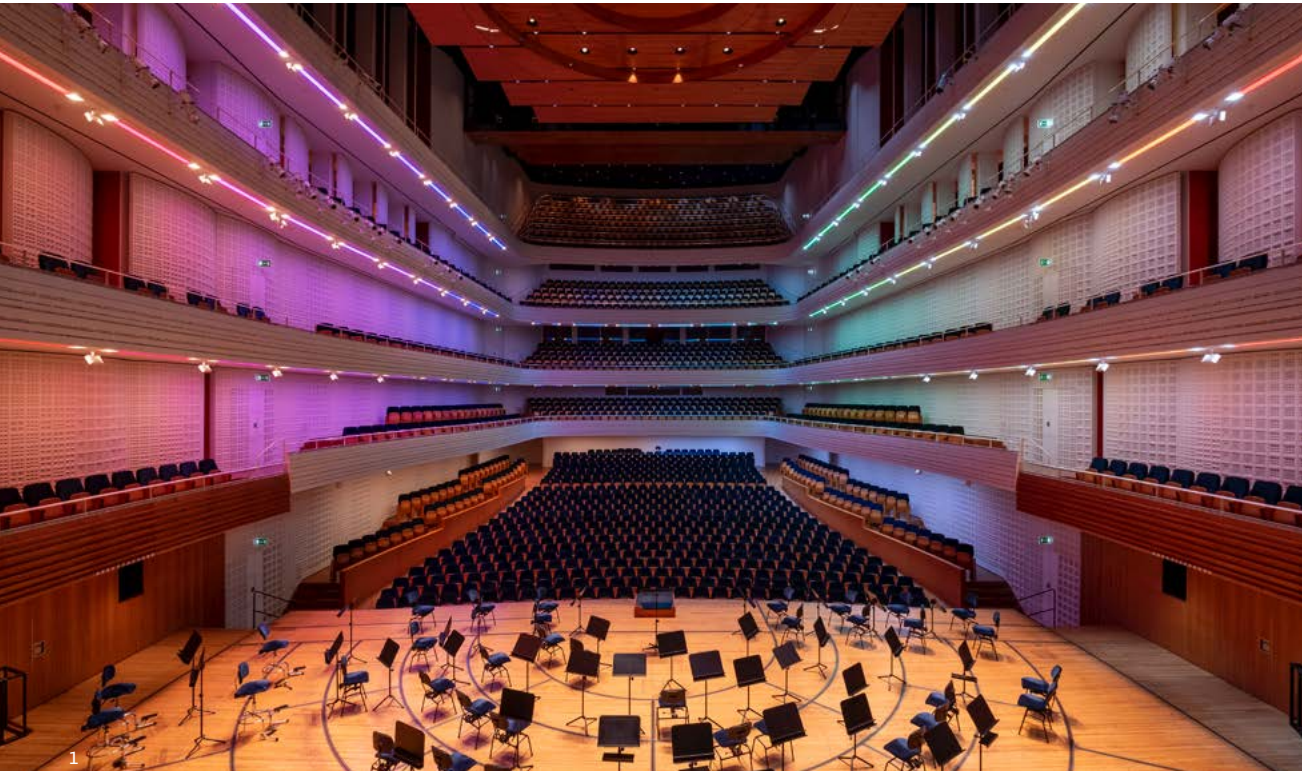




SUSTAINABLE LIGHT APPLIED IN PRACTICE

Zumtobel's success is not based solely on the sale of luminaires. In fact, we aim to create lighting solutions that deliver real added value for their respective area of application. Whether in industry, in the office, in educational establishments, shops or museums, our motto is always "application first". In practice, this means that we share our in-depth knowledge of light and its uses via many channels, helping to optimise work processes, increase building value, improve health and well-being and boost productivity – and use light to create truly sustainable buildings.

SUSTAINABLE LIGHT FOR ART AND CULTURE



ACTIVE LIGHT

To actively experience art is to look simultaneously into the past, the present and the future. With Active Light, Zumtobel not only takes into account the visual effects of light and its influence on the perception of art, but also supports museum visitors emotionally – because light contributes significantly to the atmosphere and design of a building or room.

CONNECTED ARCHITECTURE

Connected building architecture, intelligent controls and gentle lighting technology supplied by Zumtobel help fulfil visitors' expectations and requirements. State-of-the-art lighting infrastructure by Zumtobel provides the basis for the "networking" of art and cultural buildings as defined by the Internet of Things (IoT), from presence data for optimal visitor management to the recording of environmental data in order to preserve the artworks and asset tracking that secures and traces valuable exhibits.

HUMAN SUSTAINABILITY

Sustainable lighting solutions can preserve the original beauty of art and culture for many generations to come. At the same time, exhibition spaces, which are often housed in historic buildings, must also be preserved for posterity as effectively as possible and with only minimal intervention through lighting technology. Preventing damage and preserving cultural heritage are at the heart of all Zumtobel's sustainability efforts.



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- 1 Lucerne Culture and Congress Centre, Lucerne | CH
- 2 Cité de l'architecture et du patrimoine, Paris | FR
- 3 Kunsthaus Zürich, Zurich | CH
- 4 Church of Santa Maria Goretti, Mormanno | IT



Art & culture
Further inspiration



Art & culture
Sustainable light applied in practice

SUSTAINABLE LIGHT FOR RETAIL



1

ACTIVE LIGHT

The retail spaces of the future will turn shopping into an emotional experience. With human-centric lighting tailored to the specific usage situation, light not only supports consumers in their visual tasks and orientation in the retail space, but also has a stimulating effect on the limbic system, awakens desires and guarantees a feeling of all-round well-being.

CONNECTED ARCHITECTURE

Recording environmental data, analysing requirements and using resources effectively: with a detailed knowledge of target groups, retailers can offer customised products and personalised shopping experiences, such as an in-store navigator who guides customers to the items they are looking for or to a customer-specific offer, for example. Zumtobel creates the technical prerequisite for connected buildings and smart applications in retail with a state-of-the-art lighting infrastructure that integrates sensors directly at the POS.

HUMAN SUSTAINABILITY

Zumtobel is committed to the highest quality when it comes to light and design: its durable lighting technology not only enables retailers to operate efficiently and thus contribute to reducing CO₂ emissions, Zumtobel also makes retrofitting easy and ensures that the lighting can be flexibly adapted to the presentation of the goods. For example, light in the retail spaces of the future will be able to constantly present the goods in different and surprising ways in order to capture customers' attention – and guarantee the successful use of retail spaces for decades to come.



- 1 Apotheke Tosters, Feldkirch | AT
- 2 Moncler Boutique, Milan | IT
- 3 Interspar am Schottentor, Vienna | AT



Retail
Further inspiration



Retail
Sustainable light applied in practice

SUSTAINABLE LIGHT FOR THE OFFICE



ACTIVE LIGHT

Light in the office has a visual, emotional and biological effect. Adapted to the specific user situation, light supports glare-free screen work and makes communication spaces into meeting places for creative discussions. Active Light is based on the dynamics of daylight and thus supports our natural biorhythm – for maximum performance, motivation and visual comfort.

CONNECTED ARCHITECTURE

Improving the quality of indoor spaces, getting the best use out of workplaces and using resources effectively: Zumtobel uses state-of-the-art lighting infrastructure to create the technical requirements for a networked office building that is continually learning. Operating costs are optimised, while smart applications ensure the working environment can be measured and improved. From the individual lighting controls to agile office layouts: users' needs are front and centre in an environment designed just for them.

HUMAN SUSTAINABILITY

Zumtobel not only delivers future-proof lighting technology and uses Environmental Product Declarations to provide the necessary data for decarbonisation and sustainability certifications, with its human sustainability approach, it also ensures the long-term use of valuable resources in the office building. The unifying element of light balances human and ecological objectives for people and their working environment.



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- 1 Superology, Zagreb | HR
- 2 Amstein + Walther, Zurich | CH
- 3 Office AIA Life Designers, Nantes | FR
- 4 Haus der Wirtschaft, Pratteln | CH



Office
Further inspiration



Office
Sustainable light applied in practice

SUSTAINABLE LIGHT FOR EDUCATION



ACTIVE LIGHT

Light in education and research has a supportive effect on a visual, emotional and biological level. Tailored to the specific situation of the learners, light supports individual productivity in the lecture theatre and classroom or creative discussion in the seminar room. Human-centric lighting is based on the dynamics of daylight and thus supports our natural biorhythm – for maximum concentration, motivation and visual comfort.

CONNECTED ARCHITECTURE

Successful learning is supported by the right light at the right time, in combination with all of people's senses. Zumtobel uses state-of-the-art lighting infrastructure to create the technical requirements for a networked educational building. Smart applications ensure that the learning environment can be measured and optimised – and thus contribute to economic and sustainable management. From individual lighting controls to an agile seminar room layout: the needs of the learners are front and centre.

HUMAN SUSTAINABILITY

Learning processes require excellent lighting technology, whether in a retrofit or a new building, in order to create the perfect visual conditions and ensure well-being. Environmental Product Declarations (EPDs) provide the necessary data for sustainability certifications. Human sustainability means using resources as sparingly as possible and over the long term, while seeking a balance with human needs. This balance of economy and environmental protection creates the basis for a sustainable educational building that can be successfully used for years to come.



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- 1 Mannheim Business School, Mannheim | DE
- 2 Campus Berresgasse, Vienna | AT
- 3 Eyrs Primary School, Bozen | IT



Education
Further inspiration



Education
Sustainable light applied in practice

SUSTAINABLE LIGHT FOR INDUSTRY



ACTIVE LIGHT

Light in industry takes into account people's visual, emotional and biological needs. Innovative sensor technology enables activity-based lighting that automatically adjusts to the usage situation and specific visual tasks. Closely reflecting the dynamics of daylight, Active Light supports our natural biorhythm to ensure maximum safety, motivation and visual comfort. Especially in shift work, light supports precise and high-quality output.

CONNECTED ARCHITECTURE

The right light at the right time, sufficient oxygen and, depending on the time of year, the right amount of heating or cooling: Zumtobel uses state-of-the-art lighting infrastructure to create the technical requirements for a networked production ("smart factory"). Smart applications ensure that the working environment can be measured and optimised – and thus contribute to economic and sustainable management, from the tracing of goods (asset tracking) to employee safety (people tracking).

HUMAN SUSTAINABILITY

Zumtobel is known in the industry for robust and resistant luminaires that last. Environmental Product Declarations (EPDs) provide very transparent data that can be used for sustainability certifications, for example. Human sustainability means reducing resource consumption during a building life cycle that is as long as possible while also optimising light and room parameters for employees, especially during challenging shift work – for a harmonious balance of light, economy and environmental protection.



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- 1 Pieropan, Soave | IT
- 2 Thyssenkrupp Schulte, Weingarten | DE
- 3 Lagermax, Villach | AT
- 4 Opel Automobile, Rüsselsheim am Main | DE



Industry
Further inspiration



Industry
Sustainable light applied in practice

SUSTAINABLE LIGHT FOR HEALTH AND HEALTHCARE



1

ACTIVE LIGHT

Active Light, our holistic approach to light quality, creates visual comfort during doctor visits, improves patient well-being and makes work in the operating theatre extremely efficient. Light supports targeted recovery and mental health as well as precision and concentration – whenever and wherever doctors, patients and nursing staff need it. As an essential and dynamic element, light revitalises interior design thus promoting recovery processes and quality of life (“healing architecture”).

CONNECTED ARCHITECTURE

Using state-of-the-art lighting infrastructure, Zumtobel creates the technical basis for connected healthcare buildings. Recording environmental data and closely analysing requirements creates enormous added value: buildings can be adapted precisely to the needs of the users while operators benefit from optimised energy and resource consumption. The architecture becomes an adaptive system that consistently functions better for people and the environment.

HUMAN SUSTAINABILITY

Only when human needs are combined with a high commitment to sustainable building can the creation of health centres, hospitals and care facilities that will serve many generations to come become a reality. Human sustainability is not only concerned with decarbonisation (CO₂ reduction) – patients, persons needing care and personnel should also feel comfortable spending time in the building over several decades. The balance of ecological objectives and human needs are a key factor in the creation of a long-term sustainable building.



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- 1 Ospedale Regionale Beata Vergine, Mendrisio | CH
- 2 Clydebank Health and Care Centre, Clydebank | UK
- 3 MTMT, Munich | DE



Health & healthcare
Further inspiration



Health & healthcare
Sustainable light applied in practice

T H E L I G H T



Lamp phase-out

**[z.lighting/en/
zumtobel.com](https://www.z.lighting/en/zumtobel.com)**