

# LIGHTLIFE 6

Combination of historical and modern architecture in international projects in the fields of office and communication, presentation and retail, art and culture, education and knowledge

**Topic:**  
**How much tradition does  
the future need?**





Dr. Harald Sommerer  
(Photo: Jens Ellensohn)

# BUILDING BRIDGES TO THE FUTURE WITH LIGHT

Tradition and progress are integral components of the Zumtobel brand. Both parameters are at the heart of our day-to-day company operations. Zumtobel is measured on the basis of its history as well as its ability to face new challenges and develop ground-breaking, future-oriented solutions. Before taking a decisive step forward, it's just as important to look back as it is to look ahead. In this way, new developments often flourish on the basis of the already established. The key lies in a harmonious combination of the two parameters.

As an established company we pursue a comprehensive approach: we consider potential combinations of tried and tested products and innovations, in our endeavour to find the best possible solution for our customers. Development of a lighting concept by Zumtobel is always accompanied by taking into account the location of a building, its architecture, history and use, as well as the objective of constructional interventions. This applies equally to new buildings, extensions and modernisations. Renewal of lighting systems on the basis of cutting edge technologies is an integral part of our field of activity. The replacement and modernisation of lighting fixtures can improve human well-being, the quality of life at home and at work, as well as help to save the environment in a qualitative, energetic and economic context. Our challenge

lies in the harmonious integration of the design instrument light in new and old structures, thereby facilitating a dialogue between architecture, light and the environment. This is often accompanied by a confrontation between continuity and contrasts. Traditional shapes and structures are united with new elements.

This issue of Lightlife presents various projects illustrating just such a combination of tradition and modernity, of continuity and contrast, each in its very own individual and fascinating way. The renovation of the Deutsche Bank in Frankfurt am Main, the Museo del Novecento in Milan or the two interviews, one with the architect Odile Decq and the other with Delugan Meissl Associated Architects, show different and original ways of connecting traditional and modern values in architecture and product design.

We look forward to realising new and exciting projects with you and to building bridges to the future with light.

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by Dr. Harald Sommerer, CEO Zumtobel Group
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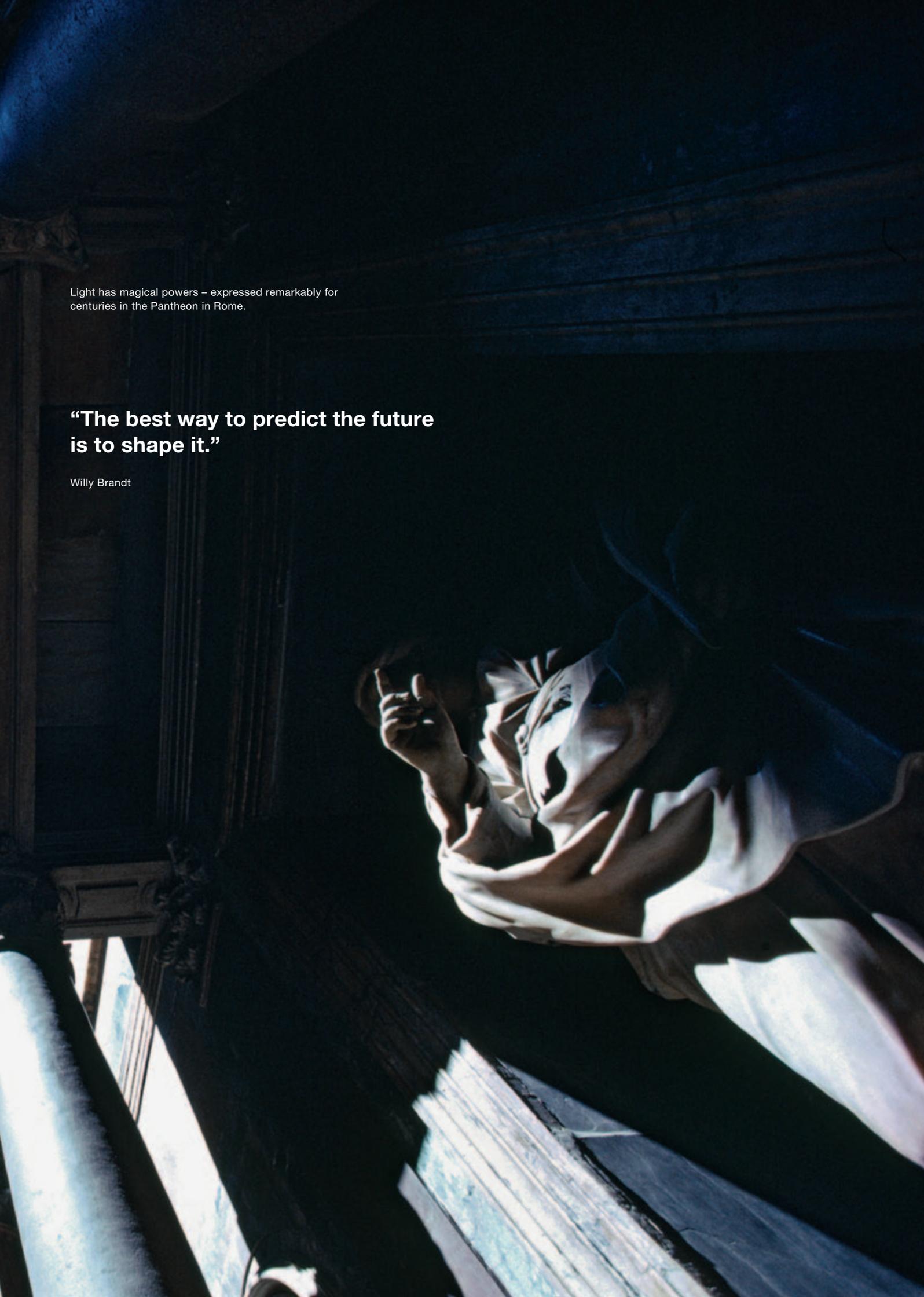
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Light has magical powers – expressed remarkably for centuries in the Pantheon in Rome.

**“The best way to predict the future  
is to shape it.”**

Willy Brandt



# THERE IS NO GAP BETWEEN YESTERDAY AND TOMORROW

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## An interview with Odile Decq

**With projects such as the recently opened Macro Museum in Rome, Odile Decq has managed to realise architectural visions that unite the past and the future under one roof. The French architect and urbanist is committed to contemporary aesthetics, based on both continuity and contrast. She was awarded the Golden Lion at the International Venice Architecture Biennale in 1996. Since the death of her partner Benoît Cornette, she has continued to run the internationally operating firm ODBC architectes urbanistes as well as directing the École Spéciale d'Architecture in Paris since 2007. Odile Decq develops her significant architectural language by analysis of the existing structural situation, followed by supplementation with her interventions and opening up to the future.**

**Madame Decq, your office in Paris is located in the heart of the city, in the Marais quarter. Is this historical neighbourhood a source of inspiration for you?**

Odile Decq: Since more than 30 years I live and work in Paris. For me it is very important, to be in the middle of the city centre. The historical neighbourhood does not have any relevance in my eyes. But in the centre, all we need is near and we are very well connected in terms of transportation, in terms of how to get through the city. I found our current studio 18 years ago. It is a former workshop for copper tubes. In the 18th and 19th century, there used to be many of those workshops in this area. Today, those ateliers are often used by architects, that's why there are so many of them in the Marais.

**Do you have a personal favourite of historical architecture in your neighbourhood?**

Odile Decq: For me, the Centre Pompidou is already a part of the history. When it was built, more than 30 years ago, I was a student in architecture. I remember well, that the building changed our approach to modern architecture in general. It really shows the border line between history and tradition on one hand and a new starting point on the other hand. For the society, of course, the Centre Pompidou was a big shock, a sort of sensational bang that showcased unexpected possibilities for urban spaces.



**“Continuity is the question of how to inscribe buildings into a context. That means that buildings are designed just for one special place, they cannot be transferred or built somewhere else.”**

**Your architecture is known for its significant contemporary aesthetics. Can you describe the impact of continuity and contrast on that?**

Odile Decq: Continuity is the question of how to inscribe buildings into a context. That means that buildings are designed just for one special place, they cannot be transferred or built somewhere else. The Macro Museum in Rome for example is an interpretation of continuity of the city, but in a contemporary way. The city enters the inside of the building, it sprawls in the foyer and over the terrace. The structure of the building’s volume admits continuity, but the way space is organized is different and contemporary. Continuity, in my opinion, has also a relation to the human body and to its movements. Therefore it is not a category of formal architectural language, but rather refers to the organisation of spaces and volumes. Contrast, however, refers to the question how to develop something contemporary in a historical context. New buildings that are inserted in a more ancient context always contrast, wherever they are.

**If buildings set up a dialogue within the urban context, what are the qualities that contemporary architecture must achieve?**

Odile Decq: I cannot answer this in general, because the dialogue always depends on the specific context of the site. Therefore I try to understand within the design process, what is a city, who was living there, what was the development of the city, and how I can continue this development in another way. The challenge in this is to find new ways that lead to the future.

**Is analysing part of your design method?**

Odile Decq: It’s true, I am doing a lot of analysing. The aim is to understand and develop a programme as well as an image for new buildings. It is not a question of form and shape that is important at this point. First, you have to understand the structure of the place.

**Is the relation to the past important to build future cities, in your opinion?**

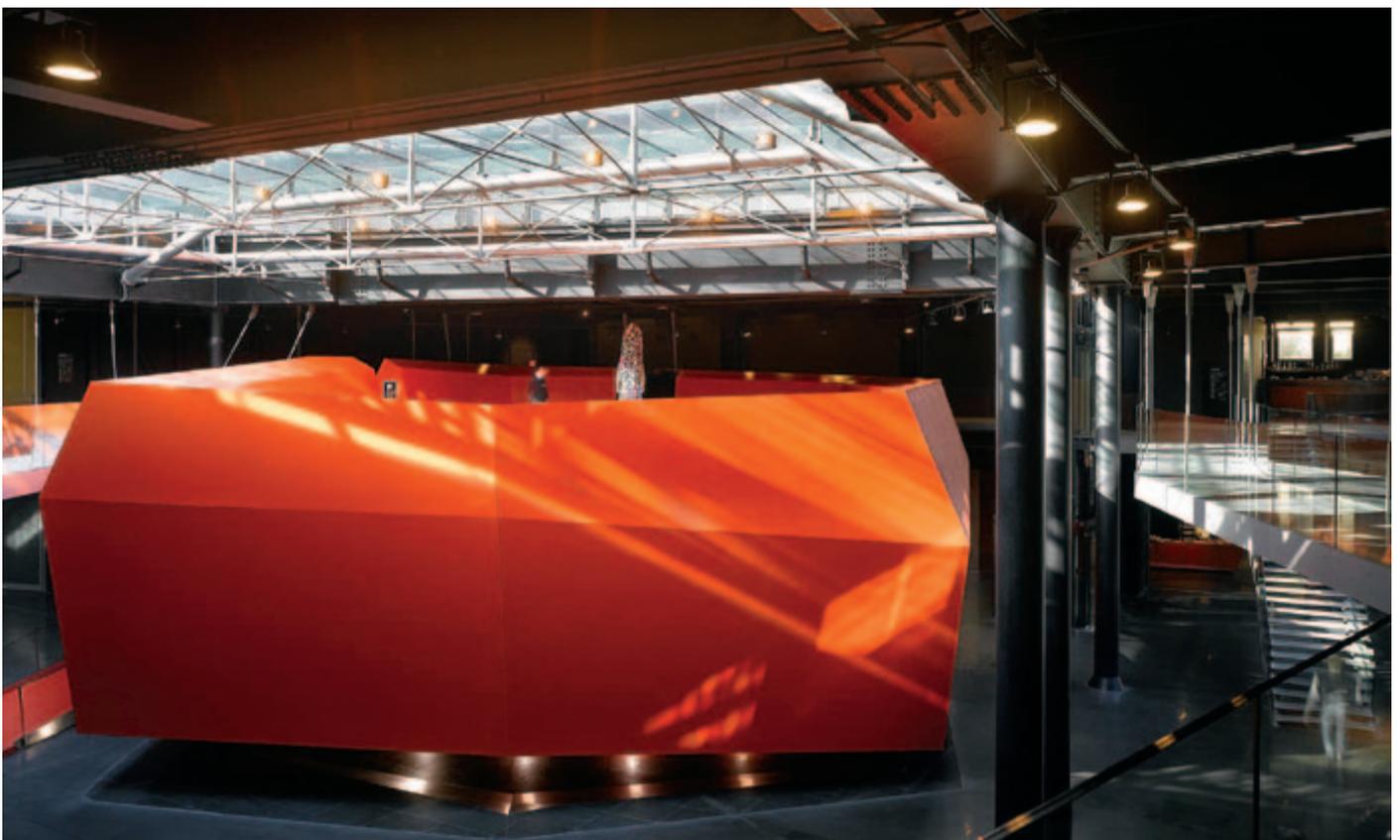
Odile Decq: By all means. There is no gap between yesterday and tomorrow. Both are combined in a continuous stream.

**“I try to understand within the design process, what is a city, who was living there, what was the development of the city, and how I can continue this development in another way.”**





With a view of the surroundings: the roof terrace of the Macro Museum in Rome is a public space in the middle of a historical residential district (top). Modern exhibition rooms open up behind the historical facade of the former brewery building (bottom).



**“An architect never builds for today, he builds for the future. Therefore architecture is one of the few disciplines that can help to invent the world of tomorrow.”**

**Conversions, extensions and renovations become more and more important in architecture. What is your general attitude to this challenge?**

Odile Decq: With the Macro Museum in Rome I have had significant experiences in that field. The former brewery building was from the 20th century, that's not really historical in a city like Rome. Nevertheless we had to keep the façade. As a result, we kept it like a screen and built a new volume behind it. I was against it – in France we even have a name for this method called “façadism”. But there was no arguing about this point. A lot of people are afraid of contemporary architecture and want to preserve everything instead.

**In France there had been the phenomenon of the avant-garde. Do you think that vanguard ideas still have a chance in architecture nowadays?**

Odile Decq: The avant-garde is a historical movement. In France, there is definitely no more vanguard architecture being built. Perhaps there was a period at the beginning of the 1970s and later the periods of the Grands Projets, that brought some fresh air into architecture. But it was not real avant-garde. I think there is no more avant-garde, because architects are too close to power nowadays.

**Where do you pick up ideas for your designs?**

Odile Decq: For me, architecture is always a thinking about the future, dreaming and figuring out the ways of life of tomorrow and trying to build houses for the future. Maybe they won't be accepted today, but they will be efficient for tomorrow.

**What is the role of technical innovations in your work?**

Odile Decq: It is very important to discover new tools that we can invent new buildings with and improve the methods of building. Sometimes it is a long process to convince the clients, the controllers and the suppliers of innovations. But it is fantastic if you succeed in the end.

**Time and again, architecture is proclaimed a leading discipline in today's culture. Can you share this viewpoint?**

Odile Decq: I am sure it is. Being an architect is a profession, in which you have to think further ahead and keep your ideas for a long period of time to be able to succeed. Architects have to think about tomorrow, to be curious about what there will be beyond today's horizon and discover how society will develop. An architect never builds for today, he builds for the future. Therefore architecture is one of the few disciplines that can help to invent the world of tomorrow.

After three years of renovation, the twin towers of the headquarters of the Deutsche Bank, which hardly appear changed from the outside, present themselves as hallmarks of a globally oriented company with roots in Frankfurt am Main.



Client: Deutsche Bank AG, Frankfurt am Main/D  
Architectural design: Mario Bellini Architects, Milan  
Project execution: gmp Architekten von Gerkan, Marg und Partner, Hamburg  
Lighting design: a-g Licht – Gesellschaft von Ingenieuren für Lichtplanung, Bonn  
Photos: Deutsche Bank (p 10+13), Andrea Flak / Text: Ursula Sandner

# DEUTSCHE BANK IN FRANKFURT AM MAIN

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## ADDED VALUE THROUGH INTELLIGENCE



The building, which obtained LEED Platinum certification as well as being awarded a Gold certificate by the German Sustainable Building Council (DGNB), provides a pleasant working environment for almost 3000 employees.



Apart from creating a pleasant atmosphere inside the head office of the Deutsche Bank, intelligent lighting solutions impress in many areas of the building. The renovation has resulted in an obvious improvement in terms of aesthetics and quality of life in the building.

The headquarters of the Deutsche Bank presents itself as a true design gem again. According to the architect Giulio Castegini at Mario Bellini Architects in Milan, responsible for the project, you can hardly tell that the two 155 m high towers originally built in 1984 have been „subjected to a radical renovation“ from the outside. This however immediately becomes evident inside the twin towers, casually referred to as ‘Debit’ and ‘Credit’ (,Soll’ and ,Haben’ in German). After three years of renovation the towers present themselves as hallmarks of a globally oriented company with its roots in Frankfurt am Main, which is aware of its social responsibility. The LEED Platinum certification by the U.S. Green Building Council and the Gold certificate awarded by the German Sustainable Building Council (DGNB) bear witness to the integrative approach of the different trades involved and the host of future-oriented and project-specific solutions implemented. The result is a pleasant working environment for almost 3,000 employees, achieved in conjunction with a big step forward in resource conservation and energy efficiency.

In a nutshell, the energy requirement was reduced by half, water consumption by over 70% and CO<sub>2</sub> emissions by almost 90%. The motto ,less is more’ is also expressed in the restriction to high quality materials dictated by the architect Mario Bellini’s stringent aesthetic concept: natural stone floors, waxed black iron for spatial structuring, Stucco Encausto for wall surfaces or LED-backlit satin glass, stand for honesty and sustainability.

The symbolism of the twin towers for the Deutsche Bank, as well as for the City of Frankfurt and the financial location Germany can now also be experienced in the converted foyer. To achieve this, the ground floor was opened up and the two towers were continued all the way to the ground. The tower silhouettes are visible through a huge skylight with a diameter of 18m, which also admits plenty of natural light. Interpreted as an exterior area, the extension of the tower façade is composed of glass sandwich elements with an integrated aluminium honeycomb structure and backlit with daylight white LEDs. This gives the entrée more height, transparency and brightness. The impression is reinforced by the showcase-style entrance portal serving as a connection to the urban environment.

Light is an essential design tool in the renovation of the Deutsche Bank. Just the right mixture of daylight and artificial light is very important in this respect (left page).

The architect Mario Bellini considers the ‚sphere‘ to be the virtual focus of the building. The airy and yet dominating sculpture floating in the foyer is made of untreated stainless steel bands and pierced by two backlit bridges.



The entire ground floor area is accessible to the public. Services provided here include a new branch of the bank as well as a public restaurant with a terrace facing the concert hall, the Alte Oper. To mark the reopening of the towers, this area was initially used by international artists for a programme called 'Globe. For Frankfurt and the World', which involved the presentation of attractive films, videos, music and discussions.

Mario Bellini considers the virtual focus of the building to be the 'sphere', which is additionally accentuated with directed light. For the architect, the sphere-shaped sculpture made of untreated stainless steel bands, floating in the air space of the foyer, reflects the past, the present and the future of a reliable and stable organisation characterised by the dynamics of change. The 'sphere' is pierced by two backlit bridges connecting the two towers. Being part of the interior area, the colour of light used here is however a neutral white – clearly differentiated from the cooler tone used for the façade. The dramaturgy based on bringing the urban environment inside the building by using differently coloured light can be found throughout the entire building complex. Light – with the right mixture of daylight and artificial light – is therefore used as an essential design instrument here.





Light is also used as a design element in the corridors and stairs. This also includes details such as the backlit handrail of the stairs using the lighting system Starflex (left page).

In combination with an intelligent building technology system, the sword-shaped luminaires developed specifically for the project, make a very special contribution to energy saving in the various different offices.

This is also shown by the extraordinary lighting solution implemented in the office floors. Deutsche Bank employees work in a modern environment with open plan offices or cellular offices separated by glass partitions, with additional business lounges, meeting rooms, think tanks, service points and share points. In combination with the intelligent building technology, the sword-shaped luminaire especially developed by Zumtobel for this project, also makes a contribution towards energy saving in the building. It was possible to increase the room height from 2.65 m to 3.00 m, because the new energy and air-conditioning concept does not require any air ducts above the working areas. The supply and exhaust air technology – fitted to the raw ceiling in supplementation of the heating and cooling ceilings – is accommodated in ceiling compartments running parallel to the façades and corridor zones and reducing the room height to 2,65 m in these areas.

The sword-shaped luminaires are fixed to the ceiling compartments in line with the building grid. In view of the complicated layout and the very unusual spatial relationships, this is much more favourable than a conventional solution using, for example, indirect/direct free-standing luminaires or simple pendant luminaires. Clearly structured office floors, making a homogeneous impression while allowing flexibility with regard to furnishing, have been created in this way. The sword-shaped luminaire equipped with a T16 35 W fluorescent lamp and a light output ratio of 82% is also a winner from an energetic point of view. It should be noted that the certification processes that take place during the planning stage involve an evaluation of the connected loads per unit area. And, as Wilfried Krumb at a-g Licht in Bonn explained, every Watt saved in the offices increases the scope of the lighting design in the conference areas for example, where a use-oriented lighting solution with several light sources is appropriate. With approximately 8-9 W/m<sup>2</sup>, and together with the additional table lamps that can be switched on individually, the sword-shaped luminaire solution is well below the 11 W/m<sup>2</sup> specified for LEED certification. Not only the connected load is minimised, but also the energy consumption. The zone-specific lighting control system, supplemented by daylight sensors and presence detectors, ensures a needs-based illumination of the office floors.

The sword-shaped luminaire is also exemplary with regard to light quality. The excellent glare control of the MPO+ micropyramidal optic technology offers good ergonomic and orientation-independent computer workplace conditions. The light coupled in is mainly directed downwards, but some of it is also directed upwards to illuminate the ceiling. An illuminance of 300 lx, defined as the ambient brightness for office space, is achieved in this manner. Together with the table lamps, the 500 lx specified by DIN EN 12464 for the usable area are obtained. The pendant version of the sword-shaped luminaire is also very attractive: light fixtures fitted with luminaires on two sides, in which sword-shaped light prisms frame a carrier structure, illuminate the workplaces on the ground floor and other areas.

Extraordinary lighting solutions were implemented throughout the refurbishment of the headquarters of the bank, such as in the meeting rooms of the management board area. Ceiling sails, formally matching the conference tables and the geometry of the room are given a unique character by the integration of an organised chaos of Slotlight II LED light lines. The seamless joints at the crossings turned out to be a special challenge in this respect. A homogeneous appearance is achieved using 1.2 W LEDs with a 3,000K colour temperature and a broad angle of radiation, together with an opal PMMA covering. LED equipment and a light output ratio of 73% are moreover exemplary in terms of energy efficiency and LEED criteria. The large conference room on the 35th floor of Tower A is worth a special mention: the texture of the central ceiling area, made of stainless steel panels with integrated heating, cooling and acoustic functions, is reminiscent of a frozen lake. Apparently irregularly arranged light lines based on the Logic-S luminaire system, provide pleasant and effective functional illumination.  $\beta_{\text{L}} \neq$

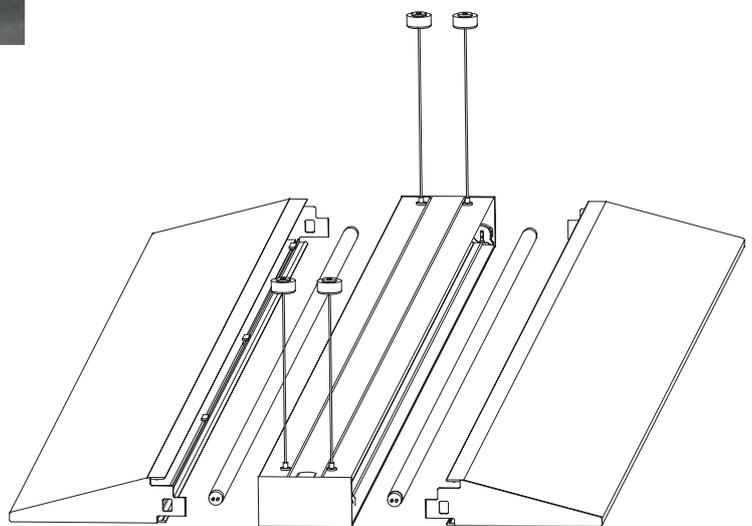
#### Lighting solution

Special sword-shaped luminaire solution, SLOTLIGHT LED light line, STARFLEX modular lighting system, LOGIC-S lighting system



A pendant version of the sword-shaped luminaire illuminates the work places on the ground floor and other areas (left). The carrier structure of the light fixtures equipped with luminaires on two sides is framed by sword-shaped light prisms (bottom).

Extraordinary lighting solutions also impress in the conference rooms. Both pleasant and functional illumination is achieved with the ceiling design using stainless steel panels with integrated light lines based on the Logic-S luminaire system (right page).





## PROJECTS IN BRIEF

Historical works of art put in the right light: the Zhejiang Art Museum in Hangzhou, China, was recently equipped with modern lighting technology. The spotlight programme Arcos – an ideal and established solution for museums – was used. (Photos: Zumtobel)

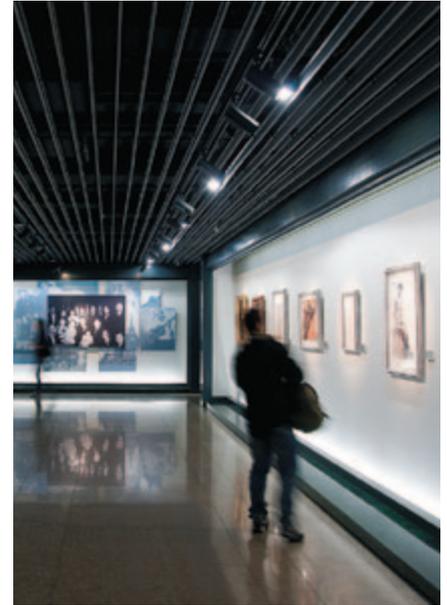


### RICH IN CONTRAST

Modern illumination of Zhejiang Art Museum treasures

Ancient findings illuminated by modern lighting: this contrast makes a visit to the Zhejiang Art Museum in Hangzhou, China, an even more interesting and impressive experience. Large parts of the museum were recently equipped with modern lighting specifically designed to protect the artefacts from damage. The museum, founded in 1929, houses a huge variety of artistic and cultural treasures. Over 100,000 objects reflecting Chinese civilisation from the Early Stone Age to modern and contemporary times are presented on an area of over 20,000 m<sup>2</sup>. Artefacts include ceramics, lacquer, wood, bone and ivory objects, jade and silks, as well as bronze objects and paintings. The building complex converted in 1993, is composed of individual houses connected to each other by corridors – a building style typical for the regions south of the Yangtze River. This allows visitors to select their own way through the museum and the changing exhibitions. This situation required the lighting solution to offer two major features: flexibility and functionality. The spotlight system Arcos

is ideal in this respect. „We profited from Zumtobel’s extensive experience in museum lighting: Arcos is a lighting solution that suits the museum perfectly. The design is simple and compact and the lighting quality is excellent as well as efficient,“ explained Mr. Zhang Wei Liang, Director of the Zhejiang Museum.



Client: Zhejiang Art Museum, Hangzhou/CN  
Architecture: Zhonglian Chengtaining Architectural Design Institute, Hangzhou/CN  
Electrical Installation: Hangzhou Ro Di Electrical Engineering Co., LTD., Hangzhou/CN  
Lighting Solution: ARCOS spotlights and wall washers, LED spots



Light plays an increasingly important role in modern healthcare. Bright rooms and colourful accents create a pleasant atmosphere and facilitate easier orientation. (Photos: Zumtobel)



## WELLNESS FACTOR LIGHT

Modernisation of Gmunden Hospital

The second extension and renovation stage of the regional hospital in Gmunden (LKH Gmunden) in Upper Austria bears witness to a new healthcare concept. The premise: „To provide the best possible medical care in modern facilities.“ The result is a conglomeration of buildings composed of new and existing structures. The hospital is enclosed by green areas in front of the nursing wards, creating a sphere of privacy and quietness. A new zeitgeist is also evident inside the hospital: an intelligent light management system allows LKH Gmunden to make an energy saving of over 60%. Up to

3,500 lamps and 500 blinds are managed by DALI using a daylight-based control system. The complex technology involved is completely hidden from patients and visitors, but the effect of the light is perceivable for all: fine light lines and indirect light harmonise with quiet colours. Light-flooded corridors and public areas make a friendly and inviting impression. The modernisation concept is continued in the patient rooms: the structural combination of Pureline single-bed luminaires and Conboard supply units provides very pleasant basic illumination as well as medical safety.



Client: Gespag OÖ Gesundheits- und Spital AG, Linz/A  
Architecture: fasch & fuchs.ZT-gmbh, Vienna/A  
Electrical design: TB Wanger & Partner ZT GmbH, Linz/A  
Electrical installation: ELIN GmbH & Co.KG, Linz/A  
Lighting solution: Special luminaire Swiss Kanal, PANOS downlight, TECTON Tetris continuous-row luminaire, SLOTLIGHT light line, RAIN moisture-proof luminaire, PURELINE surface-mounted luminaire, CONBOARD medical supply unit, LUXMATE LITENET light management system

# PROJECTS IN BRIEF



After the conversion, the huge premises by the Thames impress both from an energetic point of view as well as architecturally (top and bottom right).

Energy efficient workplace illumination is a must in a green building concept. DALI controlled direct/indirect luminaires supplied by Zumtobel were used in the Angel Building (middle). (Photos: David Thrower)



Quick link per mobile to the project video  
[www.youtube.com/zumtobel](http://www.youtube.com/zumtobel)

## IN THE TREND OF THE TIMES

Renovated Angel Building wins BREEAM award

The renovation of the Angel Building in the North of London, which included an extension by 9,300 m<sup>2</sup>, is impressive both from an architectural and an energetic point of view. Low energy requirements and high quality lighting were central conditions specified for this major renovation that transformed a six-storey 1980s office building into a BREEAM recognised 'Green Building'. Producing a high standard working environment with low energy consumption was difficult in the sense that the designers had to come to terms with the restrictions of the original building: the location of the building in the corner of the plot means that one of its facades is curved, so that lighting fixtures with special lengths had to be used. At the same time, the lighting was required to fulfil high quality standards with regard to efficiency and similarity to daylight. The work places in the building are therefore illuminated with a dynamic lighting system – using DALI controlled direct/indirect luminaires in two colour temperatures (3000 K and 4000 K) supplied by Zumtobel.

Client: Derwent, London/GB  
Architecture: Allford Hall Monaghan Morris (AHMM), London/GB  
Lighting design: GIA Equation, London/GB  
Lighting solution: LIGHT FIELDS surface-mounted and suspended luminaire, FREELINE louvre luminaire, ORILED floor/wall luminaire



Client: Levi's France (Levi Strauss Continental SA)  
Design: Levi's in-House Design Team  
Lighting: Levi's in-House Design Team  
Photos: Kristen Pelou / Text: Sandra Hofmeister

# LEVI'S GREEN STORE IN PARIS

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## ENVIRONMENTAL COMMITMENT



The subject of sustainability is a central component of the new store concept: vintage look shelves and clothes stands from other older Levi's shops were used in the store (left).

Energy-saving highlights: LED spots illuminate the shop window effectively. An intelligent lighting management system dims the light according to the prevailing insolation or darkness conditions (right page).

The new Levi's Green Store in the centre of Paris is a compact brand identity showcase that incorporates the criteria of sustainability in its image. Material recycling and reduced energy consumption in running operation are aspects integrated in the design concept of the LEED-certified store.

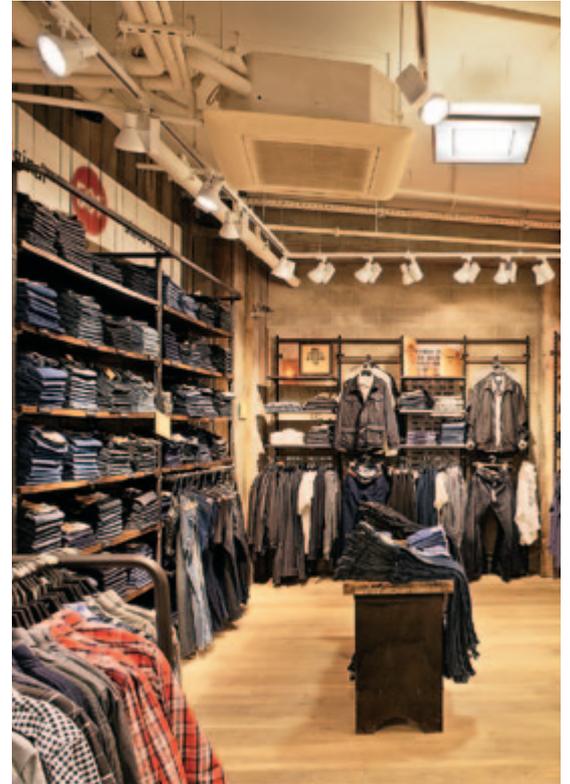


The tall shop windows of the new Levi's Green Store near Saint Lazare train station in Paris face the street and the shopping arcade Passage du Havre. Shelves and clothes stands, the cash desk as well as the changing cubicles are organised as a compact functional unit in a clearly arranged shop interior. Distinctly characterised by the typically relaxed image of the Californian jeans brand on the one hand, the interior is also a stringent realisation of a comprehensive sustainability concept. In line with the specific requirements of the LEadership in Energy and Environmental Design rating system of the US Green Building Council, the Levi's design team considered more than just the central location of the store and its well-structured retail area. Important criteria for the conversion of the premises located in an old building also included operational efficiency, energy consumption and maximum reduction as well as environmental compatibility of materials used.

Untreated timber planks and naked walls create an authentic and down-to-earth atmosphere. In line with the environment friendly concept, the Green Store is devoid of elements such as suspended ceilings, unnecessary coatings or complicated finishings.



On entering the shop, unusual details give a first hint of the overall concept: robust shelves made of simple wooden boards and steel profiles profess a love of patina. Some of the wall elements and free-standing room dividers were taken from former Levi's stores and recycled in the Green Store. In congruence with this vintage look, the naked walls in the sales area do completely without plastering or colour. In some areas, the walls are clad with plain timber planks, which also spread out on the floor. As far as the ceiling design was concerned, the Levi's design team opted for a reduction in materials and against environmentally unfriendly coatings or visual coverings. Technical piping and wiring as well as suspension systems for the lighting therefore remain exposed. Rather than being a source of irritation, they are in fact component features of the overall design concept.



Visible technology: the lighting suspension system is fully visible. Instead of being conceived as a fault, this lack of coverage complements the robust image of the shop. The spotlights can be arranged flexibly as required. Pleasant basic illumination is provided by four square LED light fields.

Reduced energy consumption is a particularly important aspect of the LEED-certified Green Store design concept. The lighting system of the store was developed with a clear emphasis on LED. The flexibility of this technology means that it can be adapted to changing seasonal requirements. Further positive characteristics include minimal power consumption and a significantly longer service life as compared to conventional illuminants. The jeans models displayed in the shop window are accentuated with LED spots. A daylight sensor dims the focused light depending on the amount of sunshine and weather conditions prevailing at the time, allowing an overall reduction of the energy consumed. The basic illumination of the retail area makes use of the daylight entering the interior of the store through the shop windows. This is supplemented by four square LED light fields suspended from the ceiling. Specific areas can be emphasised using movable spotlights on a continuous track fixed to the ceiling. The spotlights can be rotated and tilted easily as required to put the collection into the best possible light. The lighting of the changing cubicles made of robust wood is controlled by integrated motion detectors. If a cubicle is not used, the light is automatically switched off – a further energy saving detail.

A 33% reduction in the energy consumption was reported soon after the first Levi's Green Store was opened in Münster, Germany, in 2008. Levi's wants to establish new methods and alternatives for the future with the further development in the Paris flagship store. Apart from technical and aesthetic solutions, these also include other aspects of daily life: recycling paper is used in the back office and waste is separated. The electricity used, obtained 100% from regenerative sources, is supplied by a green power provider. Finally, there is even a recycling box for used jeans next to the till. About two pairs of jeans end up there every week and these are passed on to a charitable organisation. „Some customers simply leave their new jeans on and put the old pair in our box,“ reports the young store manager Katja Khiat. The new Green Store in Paris shows that sustainability is a quality of life that many customers welcome.

#### Lighting Solution

CAREENA LED recessed and surface-mounted luminaire, SUPERSYSTEM modular LED lighting system, LIVIANO spotlights, SL 1000 LED spotlights, LUXMATE Daylight light management system



From the passage, Levi's outs itself as a brand that embraces patina. The interior design and the concept of the LEED certified shop are exemplary in terms of sustainability and ecology.

# HIGHLIGHTS '11

New and additional  
products

Spring 2011



ZUMTOBEL

# Spring 2011 Highlights

- 1 **IYON**
- 2 **PANOS INFINITY Q**
- 3 **LIGHT FIELDS LED**
- 4 **OPURA**  
Offices and Communication
- 5 **SUPERSYSTEM**  
Art and Culture
- 6 **SOLINA LED**  
Presentation and Retail
- 7 **SHELF LIGHTING**
- 8 **VIVO Tunable Food**
- 9 **VIVO LED Stable White**
- 10 **MICROTOOLS**
- 11 **PANOS INFINITY LED wallwasher**
- 12 **CARDAN LED**
- 13 **MICROS Q LED**  
Hospitality and Wellness
- 14 **PERLUCE LED**
- 15 **LEDOS III S**  
Illumination of Façades
- 16 **LEDOS III M**
- 17 **ONLITE RESCLITE wall-mounted**  
Emergency Lighting
- 18 **ONLITE RESCLITE IP65**
- 19 **ONLITE ECOSIGN LED**
- 20 **ONLITE ERGOSIGN LED**



# 1

## **IYON** LED spotlight range

Zumtobel's IYON LED spotlight range is breaking new ground in the area of efficient high-quality illumination of retail spaces. The sophisticated spotlight design features a unique technical lighting system providing uniform pinpoint lighting accents for a variety of application requirements, thanks to optimum coordination with high performance LED modules. The use of high precision reflectors with aluminium-sputtered finish enables beam patterns ranging from narrow-beam to wide-angle. Thanks to excellent colour rendition properties, constant colour quality throughout the entire service life and high energy efficiency, IYON is the perfect solution for illuminating and displaying goods in shops and showrooms. Luminaire efficiency levels of up to 65 lm/W cannot fail to impress in comparison with spotlights incorporating conventional technology. IYON is available in a Stable White version boasting 3000 K or 4000 K with three power ratings: with luminous flux levels of 1100 lm, 2000 lm and 3200 lm, the spotlight is an efficient alternative to HIT luminaires up to 70 W.

Design: Delugan Meissl Associated Architects  
[zumtobel.com/iyon](http://zumtobel.com/iyon)



## 2

### **PANOS INFINITY Q**

LED downlight range

The PANOS INFINITY product range has been extended even further. The LED downlight is now also available as a square version: with a pared-down stylistic idiom that is perfectly suitable for any architecture, without compromising the excellent energy efficiency and lighting quality: luminaire efficiency levels of up to 77 lm/W set new standards. The entire PANOS INFINITY range is available in a Stable White version with stable colour temperatures of 3000 or 4000 K, as well as with unique dynamic colour temperatures (Tunable White) ranging from 2700 to 6500 K. The high lighting quality of Stable White (Ra > 90) and Tunable White (Ra 90) cannot fail to impress in a variety of lighting solutions. With the new square design of PANOS INFINITY, the spotlight range's manifold options of use in offices, but also in retail and presentation areas, are extended even further.

Design: Christopher Redfern, Sottsass Associati  
[zumtobel.com/panosinfinity](http://zumtobel.com/panosinfinity)

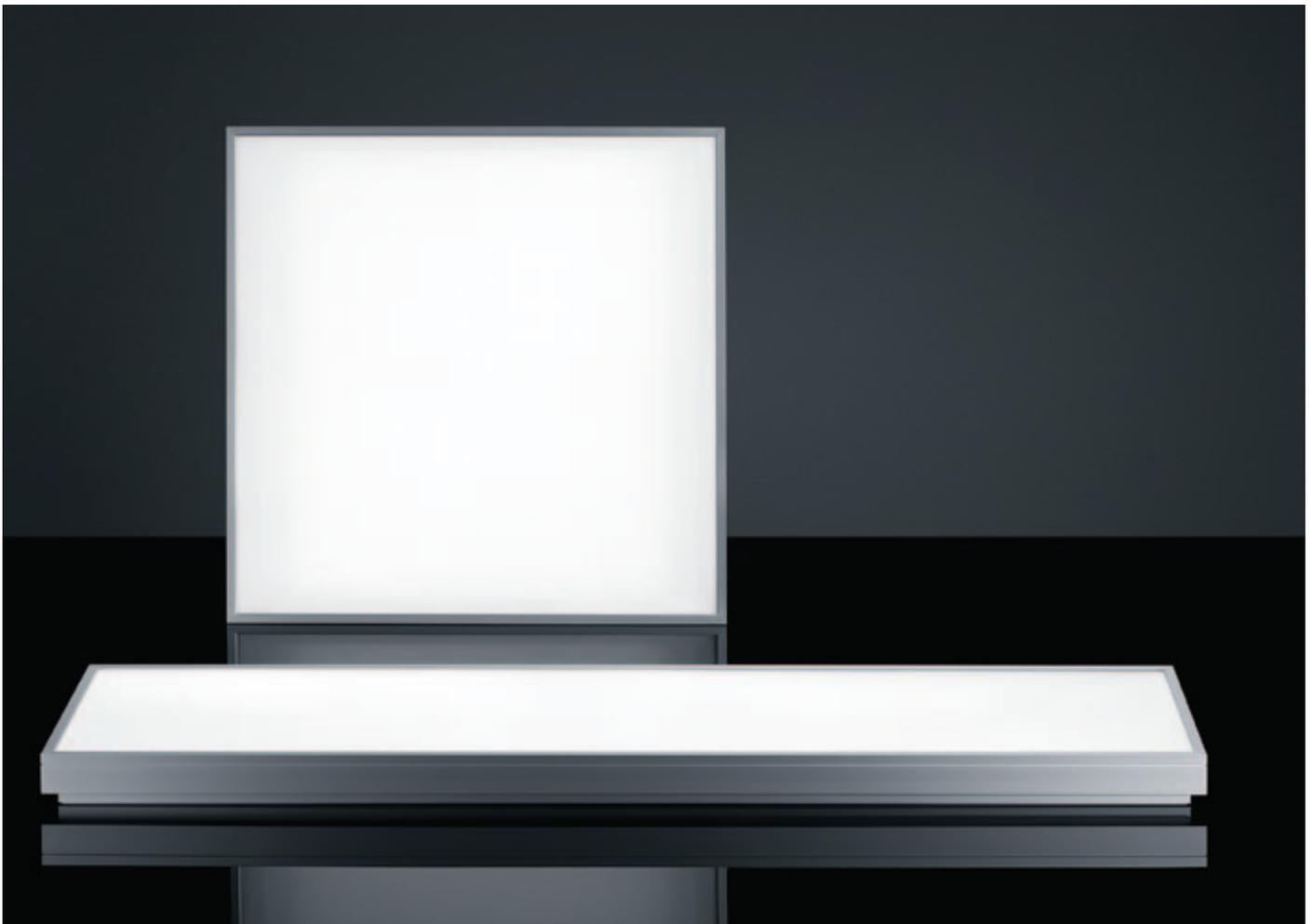
# 3

## LIGHT FIELDS LED

Recessed, surface-mounted and pendant luminaire,  
miniaturised recessed luminaire

Straight-line office design is dominated by LIGHT FIELDS luminaires with their timeless design. With the development of a comprehensive LED range featuring illuminated surfaces that are uniformly and brilliantly lit in a manner never before achieved with fluorescent lamps, LIGHT FIELDS has taken another step towards the future. Available in recessed, surface-mounted and pendant versions, in a linear or square design, the LED luminaires are highly versatile and perfectly suitable even for cluster arrangements. With more than 70 lm/W, the wide-area luminaires are among the most efficient of their kind. Moreover, they boast extremely low maintenance costs, so that an investment in this top rate lighting quality will be re-paid quickly. For LIGHT FIELDS LED, the tried-and-tested MPO+ technology has been refined even further. Thus, the luminaires are perfectly glare-free both with upright and inclined displays, and the luminaires can be arranged without any need to consider the position of the workstations. LIGHT FIELDS LED are DALI-dimmable and make the first step into the world of daylight-based and presence-controlled lighting solutions extremely easy. These luminaires are perfectly supplemented by LIGHT FIELDS LED Mini, with identical design, which are ideal for illuminating peripheral areas and corridors.

Design: Sottsass Associati  
[zumtobel.com/lightfields](http://zumtobel.com/lightfields)



## 4

### OPURA

Wall-mounted luminaire

Like the OPURA free-standing luminaire, the wall-mounted luminaire features a markedly pared-down stylistic idiom and lean silhouette as well. The OPURA wall-mounted luminaire protrudes only 170 mm into the room, providing pleasant ambient brightness with its high indirect component of 65%. The remaining 35% of the 80 W compact fluorescent lamp are efficiently used for focussed direct light with convenient glare control.

Design: Peter Andres & ON Industriedesign  
[zumtobel.com/opura](http://zumtobel.com/opura)

4 ↓



5 ↓



## 5

### SUPERSYSTEM

Recessed section

Modular and miniature design – a new recessed section marks the next development step of the SUPERSYSTEM lighting system: flush integration into plasterboard and wooden ceilings. Its discreet design is emphasised by unobtrusive installation in a consistent manner. The system's high flexibility is never compromised, since all existing SUPERSYSTEM lighting modules may be combined with the recessed section without any restrictions.

Design: Supersymetrics  
[zumtobel.com/supersystem](http://zumtobel.com/supersystem)

6 ↓



## 6

### SOLINA LED

Surface-mounted and pendant high-bay reflector luminaires

SOLINA ensures a lasting shopping experience and displays goods in the right light. The concept for success – translated into LED technology – is based on maintenance-free and focussed direct lighting. This makes the new LED surface-mounted and pendant luminaire an efficient alternative to high-bay reflector luminaires fitted with 42 W fluorescent lamps.

Design: Charles Keller  
[zumtobel.com/solina](http://zumtobel.com/solina)

7 ↓



## 7

### **SHELF LIGHTING**

LED shelf system

Zumtobel's complete system including LED modules, converters, tracks and connectors is fastened directly onto the supermarket shelf by means of magnets, without any tools. Featuring two light colours, a voltage of 24 V and dimensions suitable for 1.0 m and 1.25 m shelves, SHELF LIGHTING is a smart and cost-efficient solution for the sophisticated illumination of high-quality products in supermarkets.

[zumtobel.com/shelflighting](http://zumtobel.com/shelflighting)

## 8

### **VIVO Tunable Food**

LED spotlight

The VIVO Tunable Food LED spotlight combines all features required for the illumination of fresh foodstuffs in one luminaire: thanks to innovative technology, colour points pre-programmed on the LED board can be actuated with high precision, so that the lighting can be precisely adjusted to fruit, vegetables, meat or cheese. This makes the new LED spotlight a perfect alternative to complicated reflector/filter combinations.

Design: EOOS  
[zumtobel.com/vivo](http://zumtobel.com/vivo)

8 ↓



## 9

### **VIVO LED Stable White**

LED spotlight

Featuring the same design as VIVO Tunable Food, VIVO LED Stable White provides high-power accent lighting in retail areas and supermarkets. Integral lighting solutions in a consistent design can now be optimally implemented. Thanks to uniform lighting, stable colour temperature and high colour rendition levels of Ra 90, the LED spotlight is an efficient alternative to HIT luminaires ranging from 20 W to 70 W.

Design: EOOS  
[zumtobel.com/vivo](http://zumtobel.com/vivo)

9 ↓



## 10

### MICROTOOLS

Modular LED lighting system

High-quality finish and hardly visible at all: the MICROTOOLS LED system was specifically developed for shelves with boards made of wood, glass or metal. Modules for general and accent lighting are flexibly combined, the choice is between warm and intermediate colour temperatures. The extremely compact gimbal-mounted lighting heads are the smallest currently available on the market for shelf lighting and emphasise the sophisticated technology even further. With its excellent colour rendition index of  $Ra > 90$ , the MICROTOOLS system is also ideal for museums to gently illuminate exhibits from short distances.

[zumtobel.com/microtools](http://zumtobel.com/microtools)

10 ↓



11 ↓



## 11

### PANOS INFINITY

LED wallwasher

Hardly distinguishable from the downlight at first glance, the PANOS INFINITY LED wallwasher with a diameter of 200 mm meets very specific lighting tasks. Objects, vertical surfaces in exhibition areas, art galleries and retail spaces are uniformly lit with extremely high precision. Asymmetrical reflectors with sputtered specular surfaces cannot fail to impress thanks to the extraordinary combination of utmost efficiency and optimum lighting technology.

Design: Christopher Redfern, Sottsass Associati  
[zumtobel.com/panosinfinity](http://zumtobel.com/panosinfinity)

12 ↓



## 12

### CARDAN LED

Pivoting LED recessed luminaire

State-of-the-art technology makes the CARDAN 1000 product range ready for the future. High-power LED modules of up to 52 W allow a luminous flux of up to 3200 lm, so that the luminaires are able to replace HIT solutions up to 70 W. With radiation angles of 15 and 24 degrees, CARDAN LED are not only suitable for accent lighting, but also for general lighting, optionally even with an excellent colour rendition index of  $Ra > 90$ .

[zumtobel.com/cardan](http://zumtobel.com/cardan)

## 13

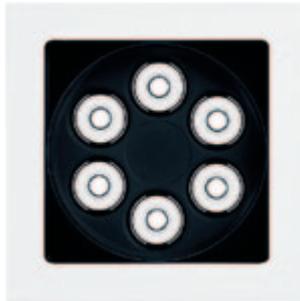
### MICROS Q LED

LED downlight

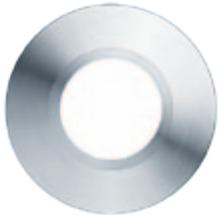
The small MICROS LED downlights are now also available in a square design. With an installed load of only 7.2 W, MICROS LED are an efficient alternative to 35 W halogen luminaires. The small downlights are able to keep up with the large ones: they are available in white or brushed aluminium finish, with colour temperatures of 3000 or 4000 K and radiation angles of 15 and 35 degrees.

[zumtobel.com/micros](http://zumtobel.com/micros)

13 ↓



15 ↓



## 15

### LEDOS III S

LED recessed luminaire

The third generation of the successful LEDOS LED product range features increased efficiency as well as miniaturised design. With a diameter of only 30 mm, LEDOS III S is able to create distinct architectural accents. With its high IP protection rating, the luminaires provide lighting for orientation and guidance indoors as well as outdoors. Fitted with flat or concave lenses boasting fully frosted, opal surfaces, they provide glare-free and uniform illumination.

[zumtobel.com/ledos](http://zumtobel.com/ledos)

## 16

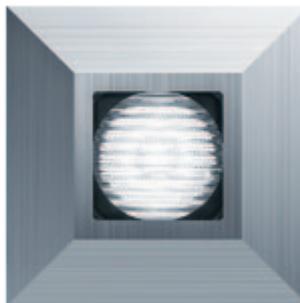
### LEDOS III M

LED recessed luminaire

Fitted with LED modules (3200 and 6000 K), the 45 mm LEDOS III M version proves its versatility as a wall, floor and ceiling recessed luminaire. With wide or narrow beam patterns, LEDOS III M is able to illuminate surfaces and attract attention by providing accent lighting. Available in circular or square design, the recessed luminaire safely illuminates stairs and corridors, thanks to asymmetrical lens technology.

[zumtobel.com/ledos](http://zumtobel.com/ledos)

16 ↓



## 14

### PERLUCE LED

Wall- and ceiling-mounted luminaire

The PERLUCE wall and ceiling mounted luminaire is characterised by smooth low-maintenance surfaces. With the new LED version, further benefits are added to the range: a more homogeneous appearance of the luminaire and a more stable colour temperature, i.e. optionally 3000 or 4000 K over the luminaire's entire service life. Available in switchable versions, the PERLUCE LED luminaire is considered an efficient alternative to conventional luminaires with 2 x 18 W TC-L fluorescent lamps.

Design: Design Studio Ambrozus  
[zumtobel.com/perluce](http://zumtobel.com/perluce)

14 ↓



17 ↓



## 17

### ONLITE RESCLITE

LED emergency luminaire for wall-mounting

In addition to the existing small, round ceiling-mounted RESCLITE emergency luminaires, their square equivalents are now available for wall-mounting as well – fitted with state-of-the-art LED technology and sophisticated lighting technology. RESCLITE can now also be used for all applications where emergency luminaires cannot be mounted on the ceiling for aesthetical or technical reasons, e.g. in case of very high ceilings.

[zumtobel.com/onlite](http://zumtobel.com/onlite)

## 18

### ONLITE RESCLITE

IP65 emergency luminaire

Whether moisture, dirt or harsh climatic conditions – RESCLITE IP65 is the perfect choice for industrial bays, workshops and outdoor areas. The surface-mounted LED luminaires with reliable protection are available as escape, anti-panic, wall and spot versions for the illumination of rooms, escape routes and staircases as well as for rescue and alarm facilities.

[zumtobel.com/onlite](http://zumtobel.com/onlite)

18 ↓



20 ↓



## 20

### ONLITE ERGOSIGN LED

Escape sign luminaire

Surface-mounted and recessed luminaires in a new LED design. The volume of the LED surface-mounted luminaire has been reduced by two thirds compared to the previous model, although the recognition range is still the same. The recessed version is flush with the wall except for the 2.5 mm pictograph. Its compact design with a recognition range of 16 m, combined with easy installation and a protection rating of IP54, make the escape sign luminaire the perfect all-round product.

Design: EOOS  
[zumtobel.com/onlite](http://zumtobel.com/onlite)

## 19

### ONLITE ECOSIGN LED

IP65 escape sign luminaire

Thanks to its high protection rating of IP65, the ECOSIGN escape sign luminaire is well-prepared for use in every application. The surface-mounted luminaire is now virtually maintenance-free, since the 8W fluorescent lamp has been replaced with high-efficiency LEDs. Installation has been considerably improved as well: ECOSIGN LED now boasts the tried-and-tested plug-in terminals for through-wiring to extend the space available for the cable duct.

Design: Matteo Thun  
[zumtobel.com/onlite](http://zumtobel.com/onlite)

19 ↓







The making of Lyon

An interview with Roman Delugan and Christian Schrepfer,  
Delugan Meissl Associated Architects

Interview photos: Markus Deutschmann, Product photos: Till Hückels / Interview: Nadja Frank

# THE SENSUOUS SIDE OF LIGHT

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Excellent efficiency and clear lines – the LED spotlight series Lyon combines sensuous design language with maximum functionality. The spotlight's sophisticated design accommodates a unique lens/reflector system for high quality and efficient illumination of retail space.

**Shops have turned into ,third homes‘. The importance of sensuality and atmosphere in their design is therefore increasing accordingly. This is the requirement that has to be met, in terms of architectural as well as lighting design.**

Roman Delugan

Delugan Meissl Associated Architects is an internationally operating architectural office based in Vienna. Founded by Elke Delugan-Meissl and Roman Delugan in 1993, the company was initially called Delugan Meissl ZT GmbH. It was transformed and enlarged to Delugan Meissl Associated Architects (DMAA) in 2004. Having been part of the company team for many years, Dietmar Feistel and Martin Josst are now also partners of DMAA. The company had its first successes in the field of residential construction at the end of the 1990s. The new Porsche Museum in Stuttgart is one of DMAA's most well-known projects. The firm is active in urban development as well as in interior and product design.



Interview with Delugan Meissl Associated Architects  
about the requirements and changes in product design,  
using Lyon as an example



**Lyon is a fascinating and very expressive combination of technology and design: a flowing synthesis of structure and technology, design and functionality. The special design of the die-cast aluminium housing allows for purely passive cooling of the LED modules, ensuring a long service life. The LED technology integrated in the spotlight structure impresses with luminous efficacies of up to 65 lm/W. The external appearance of the spotlight gives no indication whatsoever of the host of functionalities contained within: the mat black or white surface together with the soft design language used permit harmonious integration in any kind of architectural environment, imparting the medium light with an unexpected versatility.**

**The spotlight was designed by the Viennese architecture firm Delugan Meissl Associated Architects. The architects always consider a building or an object as an interaction of diverse factors. The aim is to achieve something new every time – something of a kind that does not yet exist on the market. The idea behind the development of Lyon was to use a flowing design language to express the sensuousness of light and to create something physiologically aesthetic and appealing to all the senses.**

**What are the challenges involved in the development of lighting concepts for retail areas in your opinion?**

Roman Delugan: The permanent change in our living conditions has resulted in a broader perception of our behaviour as consumers: the shopping experience has become a natural component of our everyday life; shops have turned into 'third homes'. The importance of sensuality and atmosphere in their design is therefore increasing accordingly. This is the requirement that has to be met, in terms of architectural as well as lighting design.

**To what extent does the spotlight series fulfil these requirements?**

Christian Schrepfer: The spotlight can be adjusted in many ways – from brightness, colour temperature dynamics, to different luminous fluxes. The sensuous aspects of light are reflected by the structure of Lyon.

**What is the objective of the design of Lyon?**

Roman Delugan: Retail spaces can be compared to a changeable stage setting – this major element was central in our considerations. The adaptability and formal restraint of the product is ideal for meeting the needs of such a situation. Lyon is characterised by a maximum usability and the shape, surface structure and function-oriented lighting technology selected were coordinated to achieve a coherent design. The neutral colouring of the product, deep black or white, allows optimal integration of the object in rooms, and results in a focus on the impact of the light.

The sophisticated spotlight design accommodates a unique lens-reflector system. This permits precise and even accent lighting with a range of different light emission characteristics. The special design of the die-cast aluminium housing allows for purely passive cooling of the LED modules, ensuring a long service life.



Christian Schrepfer: In the design of Lyon, we accommodated complicated technology in a classical reflector body. The fusion of the two components results in a harmonious interplay between the object and the medium light.

**Tradition and innovation – where would you place Lyon between these two contrary parameters?**

Roman Delugan: Innovation forms the central theme in our approach to every design. Tradition is however not a negative component, but rather often even a starting point. Product design implies both tradition and innovation.

Christian Schrepfer: This is a really nice thought with regard to Lyon, which is a fusion of both parameters in that sense. On the traditional side: a highly modern, patented mixing chamber lens that follows the natural laws of light, directing the refracted light precisely to the object via the reflector. On the other side: the LED board constructed as a module and meeting the fast pace of technological development. The two components – the highly innovative illuminant, as well as the optical system that follows the laws of nature – are combined in the product.

**New LED technologies or colour temperature dynamics offer highly individual options for product presentation, which can for instance be adapted to the time of day or year. Lyon makes this kind of use possible in the shape of a spotlight.**

Roman Delugan



**Considering product design then and now – what do you think has changed?**

Christian Schrepfer: Whole product worlds seem to disappear in the digital world these days. That's why I think it is extremely important to create valuable products. This means: products with special physical and haptic properties – as is the case with Lyon. Surface and shape generate an object here which consciously differentiates itself from other products.

**What do you think will change in the illumination of retail areas in the next few years? Do you have a vision?**

Roman Delugan: Online shopping is becoming increasingly important because it is getting easier and easier to use corresponding platforms. Maybe this will even involve entering three-dimensional spaces in the near future. Virtual worlds cannot however replace the ability to actually perceive the physical atmosphere of real retail spaces. New LED technologies or colour temperature dynamics offer highly individual options for product presentation, which can for instance be adapted to the time of day or year. Lyon makes this kind of use possible in the shape of a spotlight. Such impressions on the senses cannot be gained in the web or on a monitor, which brings me back to my original statement: the shop as 'my third home' in which I feel comfortable and where different moods, atmospheres and sensuality represent central elements of physiological perception.

Whole product worlds seem to disappear in the digital world these days. That's why I think it is extremely important to create valuable products. This means: products with special physical and haptic properties – as is the case with Lyon.

Christian Schrepfer,  
Delugan Meissl Associated Architects

The high-performance LED modules of Lyon offer excellent colour rendition and high energy efficiency. Two different sizes in mat black or white are available for flexible integration in various different shop concepts.



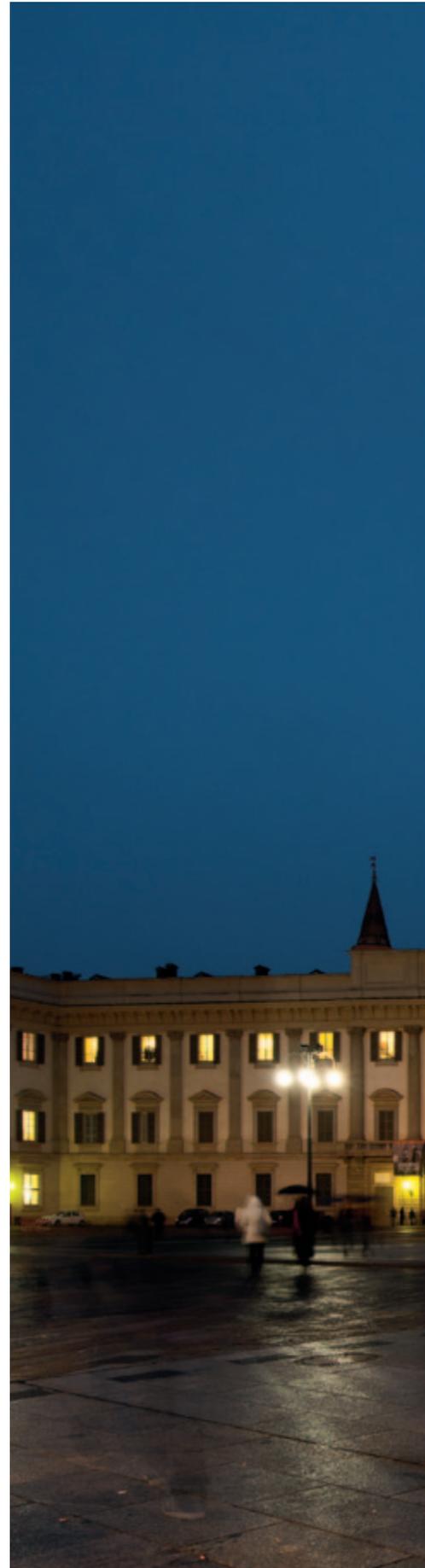
Client: Comune di Milano, Milan/I / Architecture: Italo Rota, Fabio Fornasari, Milan/I  
Architecture (competition and execution): Gruppo Rota: Italo Rota, Fabio Fornasari,  
Emmanuele Auxilia, Paolo Montanari / Interior and lighting design: Alessandro Pedretti, Milan/I  
Electrical installation: Cooperativa Cellini Impianti Tecnologici, Prato/I  
Photos: Jürgen Eheim / Text: Claudia Fuchs

# MUSEO DEL NOVECENTO IN MILAN

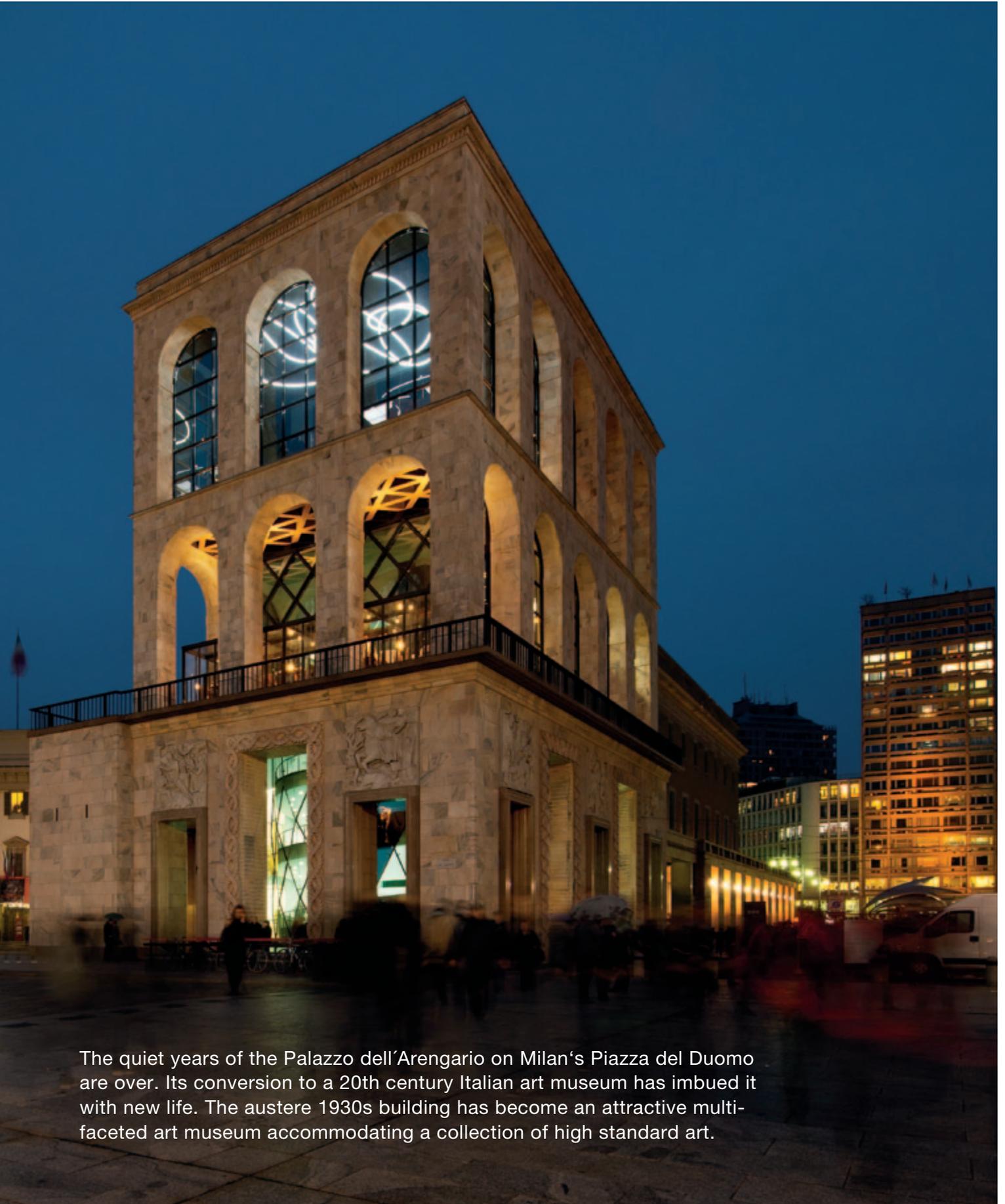
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## INNER GLOW

The exhibition areas are accessible via large illuminated door frames. The portals of light are created using planar light modules – an elegant way to direct visitors to the different rooms, as shown here in the entrance hall.



At night, the converted Palazzo dell'Arengario allows a special view of its interior. A delicate interaction of light and architecture offers passers by an interesting view.

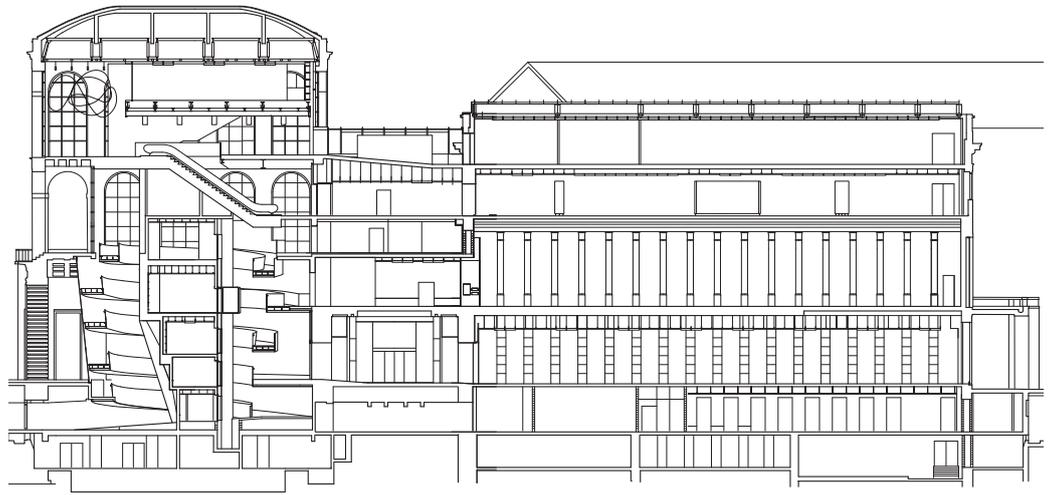


The quiet years of the Palazzo dell'Arengario on Milan's Piazza del Duomo are over. Its conversion to a 20th century Italian art museum has imbued it with new life. The austere 1930s building has become an attractive multi-faceted art museum accommodating a collection of high standard art.



Despite its prominent position only a stone's throw away from the Cathedral, the somewhat forbidding Palazzo dell'Arengario was not really a feature that was high in the public awareness over the past decades. The construction of the Palazzo was commenced at the end of the 1930s using the typical monumental design language of that period. It was finally completed much later, in the 1950s. With their striking monumental round arches, the two cube-shaped front buildings make up an imposing urban feature. The City of Milan recognised the potential of these centrally located premises as a home for its extensive collection of 20th century Italian art. The competition for the conversion of the premises formerly used as office and exhibition space to the 'Museo del Novecento', which also includes a long rear wing and the second floor of the Palazzo Reale, was won by a group of designers under the direction of the Milanese architect and designer, Italo Rota. His design connects the existing buildings to form a very stimulating museum: by integrating the architectural remains of former times and supplementing these with contemporary interventions, the design opens the museum to the city.

Although the façade was hardly changed – apart from glazing the walled-up round arch windows in the middle storey – the tower-like front building on the Piazza del Duomo looks like a transparent shell at night, appearing back-lit and permitting glimpses of its new inner life. Entrance ramp and café are visible behind a large glazed area, with Lucio Fontana's lighting installation 'Struttura al neon' above shining all the way out on to the Piazza del Duomo. The building was extensively gutted to achieve this new openness and reorganised into freely accessible areas. A dynamic, spiral-shaped ramp screws itself upwards around a central reinforced concrete core, leading visitors from the museum's own subway access to the exhibition areas via an aquamarine-coloured walkway. The glass façade encasing the ramp permits a view into and out of the building, which – similar to a film sequence – changes with every step. This progression is emphasised by the illumination points used in the lighting concept of the ramp, accentuating the spatial effect and lightness of this architectural statement. The light points follow the curves in two different ways: downlights integrated in the ceiling trace the route and illuminate the ramp area, while small LED spots on the balustrade emanate blue-green light inwards. The spiral is turned into a luminous object – a representation of 20th century modernity almost suggestively attracting passers.



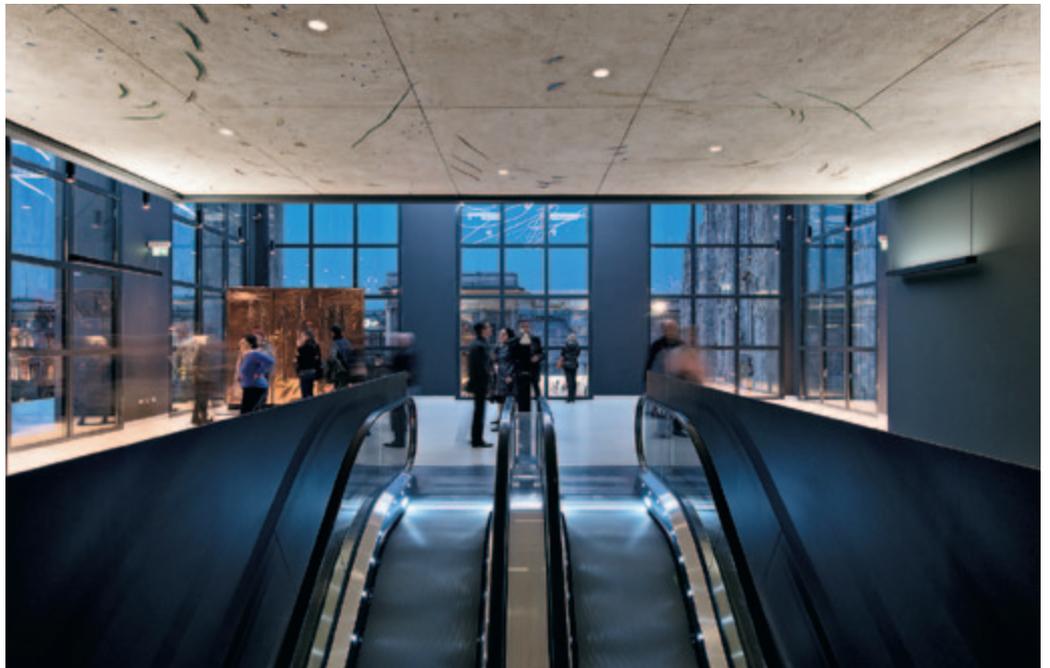
Walls and floors in uniform base colours create a calm background for the works of art. The luminous ceiling Cielos provides a pleasantly diffuse and homogeneous illumination of the rooms (left page).

Longitudinal section, on a scale of 1: 700 (top). A spiral-shaped ramp screws itself upwards through the middle of the museum. LED spotlights integrated in the ceiling and handrail transform the spiral into a fascinating light object (bottom).



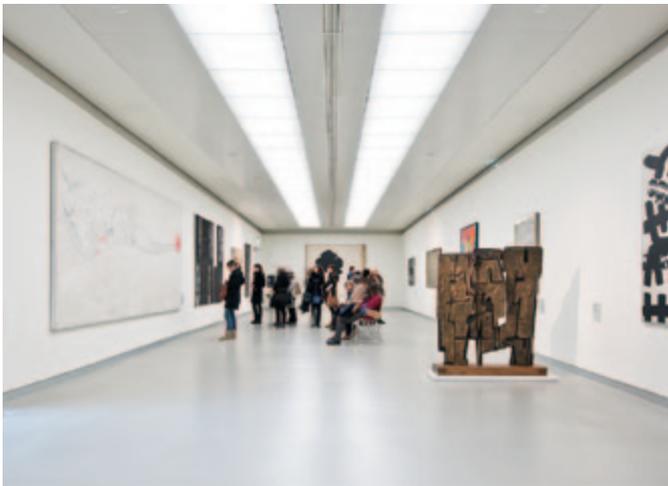
Light is also an important design element used at the interfaces of the various different areas of the museum. The entrances to the exhibition rooms can for example be identified as ‚portals of light‘: light modules cover the frames of the doors and emphasise the passages to the inverted gallery rooms. The main room of the piano nobile surprises with monumental marble columns and a richly decorated ceiling. It is dedicated to Futurists such as Umberto Boccioni and his contemporaries. The smaller exhibition rooms of the Arengario wing were completely redecorated. „Our aim was to create a peaceful atmosphere with soft, neutral colours and homogeneous lighting – the works of art are the stars here, after all,“ explains Alessandro Pedretti, the architect at Studio Italo Rota responsible for the interior and lighting design of this project. Walls and floors are tone in tone; new presentation areas and columns designed by the architects are integrated in elegantly subdued white and grey tones. An even, diffuse basic illumination is achieved with a Cielos luminous ceiling. Depending on the layout of the room, the modules are arranged as linear light bands or as squares. The homogeneous illumination of the rooms is controlled using the central lighting management system Luxmate Litenet. The luminous ceilings in the galleries are contrasted by the vertical light lines integrated flush into the walls, which serve to illuminate the access areas.





An escalator leads from the second floor exhibition rooms to the uppermost room in the Arengario tower, where Lucio Fontana's works are exhibited. Room-high glazing allows visitors to enjoy fantastic views of the surrounding buildings (top).

The luminous ceilings Cielos are arranged in squares or in the form of linear light bands, depending on the room structure. The lighting management system Luxmate Litenet ensures optimal and efficient utilisation of lighting (left page and left).



The various exhibition levels are connected by means of escalators located in a new building part at the end of the Arengario wing. The pointed arch windows of the Palazzo Reale are disconcertingly close through the completely glazed façade in this area. The topmost floor of the Arengario tower accommodates a light-flooded room with works by Lucio Fontana and a fantastic panorama of the Piazza del Duomo. Impressive views of the surrounding area can also be obtained from the lofty height of the new glass connection bridge leading to the Palazzo Reale. The presence of these urban images is even carried into the introverted exhibition galleries: such as the Madonnina statue on the cathedral tower looking in through the glass roof of a small side cabinet. A tour of the collection of 400 works of art ranging from Futurism to Arte Povera is complemented by a walk through the history of the city. This parallel experience is achieved by the conscious integration of still life images of the city – with architecture from various centuries, from Gothic cathedral to contemporary bank building – throughout the museum. A stony witness of the Duce years, the converted Palazzo dell'Arengario can now make a new contribution to the historic fabric of the city, connecting old to new in the illuminated entity of the Museo del Novecento.

#### Lighting solution

PANOS INFINITY LED downlight, special LED spots, HEDERA LED luminaire, CIELOS modular lighting system, LINARIA light line, SCUBA moisture-proof luminaire, PERLUCE louvre luminaire, LUXMATE LITENET lighting management system, ARTSIGN and COMSIGN escape sign luminaires



## When walls speak

### Berlin artist Friederike von Rauch about her way of looking at spaces

Photo: Friederike von Rauch

I think that architecture can be perceived as landscape, and landscape can be perceived as architecture. My fascination for this interaction of spatial experiences is at the centre of my photography. To work out the character of a place, to consider it quietly and then intensify it emotionally – these are essential steps in my way of looking at things and the approach I use. The photographs show places with traces of human interventions in them, which tell stories and relate experiences. The human beings themselves are not represented. Information is provided by cryptic signs instead. Signs of wear are an indication of habits and regular actions or routes taken. Orderly objects show dedication and discipline. These interrelationships can be explored together with the camera. When I do this, I myself become a space for other spaces, and I can let spaces grow inside myself. The walls start to speak in the course of this journey: a water stain under a radiator, remnants of paint on a door handle, a left behind apron, a taken down painting. I follow these signs and indications, investigate the architectural transformations, the major and minor interventions, the phases of conversion, restoration and alteration. Intermediate stages fascinate me – the state of being unfinished and vulnerable, not having reached the end yet. I scrutinise what I see, and listen to what I hear inside myself and in the corners of the spaces that I am looking at. The first glance is followed by a second and third. In that way, everything superficially dramatic and expressive gives way to a calm and quiet observation.

An identification of the locations shown is not essential for understanding the photographs. What matters are the selected aspects and moods that can be captured in these places, which speak for themselves without thematic definition. I absorb spatial atmospheres and follow them, but not in the sense of documentary evidence or as a testimonial of an event. Personal spatial interpretations are developed instead.

An accurate procedure and a limitation of means allows spaces and rooms to speak. The first step is a precise selection of the places and environment. I do analog photography with natural light or with existing sources of light and I prefer to be alone with no more luggage than I can carry myself. I don't change the situations that I find at the location. With an openness to surprises or to whatever I may find, I go on a kind of discovery tour driven by curiosity. Difficult terrain, dark corridors, undefinable odours or a fear of heights do not stop me on my way to the spaces I want to investigate. Opportunities for this are almost everywhere. Sometimes it's pure coincidence, sometimes an invitation to work in a particular building, to explore it with my experience, with my preferences and aversions, that leads me to visualise all the information suggesting itself to me

Friederike von Rauch lives and works as an artist in Berlin. Her photography work has been exhibited in Germany and abroad since 1998. The publications 'Sites' (2007) and 'Neues Museum' (2009) were published by Hatje Cantz Verlag.

[www.kunstagenten.de](http://www.kunstagenten.de)  
[www.vonrauch.com](http://www.vonrauch.com)

Concentrated view: Friederike von Rauch, photography artist from Berlin, reduces her observations to the essential and explores the substance of rooms.



The Rolex Learning Center exemplifies our university as a place where traditional boundaries between disciplines are broken down, where mathematicians and engineers meet with neuroscientists and microtechnicians to envision new technologies that improve lives.

Patrick Aebischer, President of EPLF

The rambling building of the EPFL Rolex Learning Center is spectacular from the outside, especially in the early evening hours. The light emerging from inside enhances the sculptural character of the building.

Client: Losinger Construction SA, Bussigny/CH  
Architecture: SANAA, Tokyo/J  
Electrical design: Scherler SA, Le Mont/Lausanne/CH  
Electrical installation: ETF, Bulle/CH  
Photos: Hisao Suzuki (p 40/41), Andrea Flak / Text: Frank Kaltenbach

# EPFL ROLEX LEARNING CENTER IN LAUSANNE

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## FLOWING SPA- TIAL LANDSCAPE



Houses as though cut out of pristine white Japanese paper with a pair of scissors, wide open spaces without any visible boundary between inside and outside, diaphanous membranes effectively blurring the border between virtual and physical spatial experiences by means of transparency, translucence and reflection.

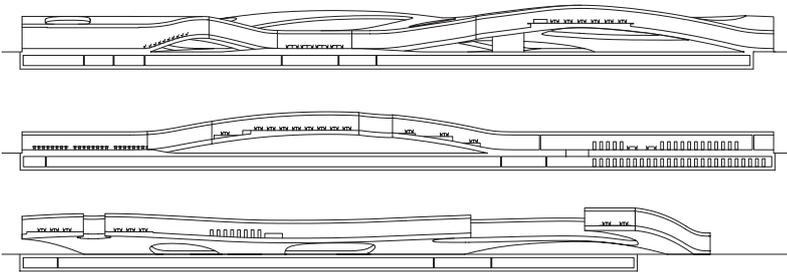
Some architectural critics claim that SANAA actually reinvent architecture with every building they create – and this is not really an exaggeration. This especially applies to the Rolex Learning Center, the new heart of the university campus of the École Polytechnique Fédérale de Lausanne (EPFL). But what is a Learning Center? This micro campus within the campus covers an area of 17,000 m<sup>2</sup> and contains a large library, student work places, offices for researchers, cafés, a top restaurant, a book shop, a multifunctional auditorium and – typically Swiss – a bank branch. This project however entails far more than the provision of functional space. The new construction is intended to promote interdisciplinary exchange between scientists, but even more so, to strengthen the position of the EPFL in the global research landscape and to attract the best international researchers with an inviting environment. This, and more, is certainly offered by the SANAA-designed pavilion measuring 166 x 121 m. The building contains 14 round patios with diameters ranging from 7 to 50 m, which look as though they might have been punched out of the structure.



The huge single space with loosely interspersed functional areas, radiates an enormous feeling of openness. Different lighting moods are designed to provide orientation and suitable atmospheres, such as for concentrated work (left and bottom).

Nothing may disrupt the reduced design: to be able to cater for the different lighting situations with only one lighting fixture design, the architects and Zumtobel collaborated in the special development of the technically sophisticated cylindrical luminaires. Sectional drawings, on a scale of 1 : 1500 (right page).





Kazuyo Sejima and Ruye Nishizawa consistently pursued the theme of a completely dematerialised glass envelope in their Glass Pavilion at the Toledo Museum of Art, while studying the concept of round rooms within a rectangular white pavilion in the 21st Century Museum of Contemporary Art at Kanazawa. In their new construction in Lausanne, these two design principles are combined and supplemented by a further significant factor: an undulating floor and ceiling topography. The result is not only a completely new building type, but also an absolutely fascinating flowing spatial landscape composed of alternating narrowness and wideness, high and low areas, places for exchange and communication, but also for retreating, for quiet thought and solitary contemplation. Kazuyo Sejima explains: „When you look at the curved ceiling, you will notice that the surfaces are completely uninterrupted. We have kept clear of any built-in components to retain this continuous impression. Individual functional areas are not differentiated by partitions, but by using differing lighting atmospheres instead. The ceiling not only changes with daylight, but also radiates the artificial light back into the interior space, whether emanated by the façade spotlights, table or floor lamps or pendant luminaires.“ During her first tour of the finished building, Sejima was obviously impressed herself by the consistent realisation of her conception of minimalist architecture, in which no constructive detail pushes itself to the fore and no technical requirement disturbs the overall impression.



Considering the demands on the supporting structure, façade and interior finishing work resulting from the complexity of the geometry, this is anything but an easy feat to accomplish. The rooms call to mind the elegance of an ice dancer rapt in the harmony of the movement during a performance, completely oblivious of the hard training that has gone before. The huge loads of the steel roof construction are distributed on only a few delicate cylindrical support columns, most of it carried by the façade posts of the patios designed as slender T-profile or hollow profile sections depending on the specification. Fixed to the supports and façade posts are specially developed lighting fixtures. While quietly submitting to the architecture, these completely white abstract cylinders make a significant contribution to the elegantly subdued atmosphere. As for the façade and supporting structure, the architects provided very detailed specifications with regard to a uniform and unobtrusive appearance. To be able to cover the different lighting situations in the building with a single design element, the luminaires were fitted as single, double or triple versions. A swivel mounting bracket allows different angles to be adopted to the diffusely reflecting ceiling. The technical performance and the internal fittings are also individually adapted to each particular situation: in addition to the 35 Watt HIT metal halide lamp with a special IOS reflector system, many of the 282 special luminaires developed for the EPFL Rolex Learning Center are fitted with a 100 Watt halogen lamp as an emergency light. Recessed LED ceiling lights and elegant light lines in the lobby and reception area ensure additional functional lighting as well as permitting accent lighting design features. In the round cell offices, a pleasant working environment is created by minimalist free-standing luminaires, when the normally ample daylight is insufficient. The architects devoted special attention to an evenly bright, yet glare-free illumination of the reading places in the library. The filigree pendant luminaires do not hinder the flow of the ceilings above the reading tables like a white sky. Thanks to the micropyramidal optic technology, the light is directed to the table surfaces without influencing the atmosphere of the background illumination.

From outside, the EPFL Rolex Learning Center is at its most impressive just before sunset: for one magical moment, the superimposition of the reflexes of the setting sun, the dark blue of the sky and the pure white interior illumination radiating outwards, transforms this unparalleled building into a unique sculpture of space and light.

#### Lighting solution

Special luminaires, SLOTLIGHT II recessed luminaires, CRAYON LED downlights, MINIUM LITE free-standing luminaire, FREELINE pendant luminaires



**Question time: Jean-Pierre Ramseyer, Dipl.-Elektroingenieur (CH), responsible department manager at Losinger Construction SA, Switzerland**

**The project was very challenging from a technical point of view. What was the biggest challenge during the construction?**

Jean-Pierre Ramseyer: To remain inconspicuous and to respect the architecture as much as possible. The energy issue turned out to be just as complex. The building is Minergie-certified and SANAA designed about 90% of the light fixtures. These are very small, and so they offer very little space for technology. Highly efficient luminaires were however required because of the size of the building and because SANAA specified indirect illumination.

**The EPFL Rolex Learning Center is an organic building that is virtually flooded by light. You must be very proud of the result. Which detail are you most fond of?**

Jean-Pierre Ramseyer: SANAA attaches great importance to an extraordinary view of space as a whole, as well as paying a lot of attention to detail. That makes it very difficult to talk about preferences. It's the whole thing that impresses in this case, creating a great variety of spatial situations that always adapt to the function of the different locations.

**The building is designed to make clever use of daylight. What is the importance of the artificial lighting in this context?**

Jean-Pierre Ramseyer: In my opinion, the main problem is that people tend to think about daylight in terms of how much of it they can catch. In this case, it's really more about the balance between daylight and artificial light, to provide appropriate protection from daylight. We don't only have one, but many façades in the various round elements through which sunlight enters in different ways. A large variety of different methods of artificial illumination and lighting management are therefore required.

**The special luminaires were developed in collaboration with Zumtobel. How did you experience this collaboration?**

Jean-Pierre Ramseyer: We found the same drive and passion at Zumtobel as we did in the people on site. It wasn't only about creating attractive lighting fixtures - they also had to be efficient. Kazuyo Sejima and Ryue Nishizawa were particularly conscientious. It wasn't too much trouble for them to come over from Japan on several occasions to supervise our scheduled tests as soon as a phase of the project was completed. This commitment was really amazing. The architects didn't leave anything to chance. And the result met their expectations!

SANAA Architects was awarded the coveted Pritzker Architecture Prize for the complete project on 17 May 2010.

A glare-free illumination of the reading places was required in the library area, which was however not to disrupt the ceiling surface and the basic illumination of the room. An optimal solution was found in the pendant luminaire Freeline (left page).

The weight of the roof construction is distributed on a few delicate cylindrical support columns and the facade posts of the patios. Built-in structures were done without as far as possible to retain the freely flowing impression (bottom).





Zumtobel simulated dynamic lighting solutions for all retail areas in real situations at the stand. (Photos: Jens Ellensohn)

### A „DEPARTMENT STORE“ FULL OF LIGHTING EXPERIENCES – LED SOLUTIONS IMPRESS AT EURO-SHOP FAIR

Zumtobel presented trendsetting lighting solutions for superior lighting of retail areas at this year's triennial EuroShop trade fair. Innovations for various retail situations were shown, including lighting systems for shelves, shop windows, fresh-product counters or display tables. Lighting concepts based on LED technology attracted a lot of interest. A major new product highlight presented at the fair was the spotlight range Lyon. With a design especially developed for LED technology, Lyon offers outstanding lighting quality together with a light output of 3,200 lumen. Another new product was Microtools, a modular LED system developed by Zumtobel for shelf lighting systems. Microtools offers minimalist design and very good lighting and colour rendition quality. Ideal product presentation can be achieved using Vivo Tunable Food, an innovative LED spotlight system for fresh-food

counters. All sorts of different fresh products can be presented in the right light selected from a range of colours - at the push of a button. Vivo Tunable Food offers a great alternative to currently used complicated reflector/filter combinations.

Lighting concepts for retail areas are becoming increasingly important because of the emotionalisation and differentiation of sales areas that they allow. Functionalities such as Tunable White therefore also played a significant role in the innovations presented by Zumtobel at the trade fair. This technology implemented in a range of LED downlights and spotlights, makes it possible to create white light at different colour temperatures ranging from 2700 K to 6500 K.

Very positive feedback was received from visitors with regard to the Zumtobel stand: exclusively white tones during the day were transformed into an impressive multimedia performance stage with dynamic lighting scenarios at night.





### FASCINATION OF LIGHT, ARCHITECTURE AND ART – ZUMTOBEL AT THE EUROLUCE 2011

Zumtobel welcomed its guests at the Euroluce on a large piazza this year. The concept of the stand focused on the presentation of LED lighting solutions and products for the application areas office and communication, art and culture, retail and presentation, as well as the subject of dynamic colour temperature (tunable white). Different ways of designing architecture and spaces with comprehensive lighting concepts using top design quality and the latest LED technology were shown. These concepts moreover aim to achieve a perfect balance of lighting quality and energy efficiency.



The SANAA exhibition in the Light Centre Milan was opened by Zumtobel during the Euroluce. Numerous guests enjoyed an exciting evening with interesting projects illustrating the work of the Japanese architectural office. (Photos: Zumtobel)

The cityscape of Milan was enhanced by the fascinating installation 'Growing by Numbers' from December until the end of the Euroluce. Milan's seven largest skyscrapers were highlighted by nine-metre-high numerals of light composed of 1650 Capix LED lights.

Two evening events were hosted by Zumtobel in the city of Milan during the course of the trade show: the lighting installation 'Growing by Numbers' was presented in conjunction with the architectural firm Architettura Attuale on 11 April. The installation highlighted Milan's seven tallest skyscrapers in a very original way from December to mid-April. Nine meter high numerals illuminated with Capix LEDs fitted to the façades of the buildings were used to stage this interesting night-time show – a fascinating combination of light, architecture and art. This symbolised the impressive change taking place in Milan: the city centre is noticeably growing mainly in an upward direction.

The opening of the exhibition 'KAZUYO SEJIMA + RYUE NISHIZAWA / SANAA, Tokyo' in the Light Centre Milan took place in the evening of 12th April. The exhibition, which ran in the Light Centre until 29th April, showed projects realised by the Japanese architects and winners of the 2010 Pritzker Prize Kazuyo Sejima and Ryue Nishizawa with their office SANAA based in Tokyo. The exhibition permitted fascinating insights into the work of SANAA with the typically subtle interplay of light and material. Projects presented also included the Inujima Art House and the Teshima Art Museum in Japan.

### LIGHT CENTRE IN DUBAI ZUMTOBEL EXPANDS ITS SERVICES IN THE MIDDLE EAST

Zumtobel opened its first Light Centre in the Middle East in an evening ceremony on 2 March in Dubai. The new generously sized premises (750 m<sup>2</sup>) in Dubai present application-related lighting solutions. The Light Centre offers an important opportunity for customer care and development in the Middle East. This step emphasises Zumtobel's aim to continue to grow in non-European markets and to strengthen its position in important economic regions.

Zumtobel has been present in Dubai with its own marketing company since 2007. The Middle Eastern market is currently looked after by 15 employees. The staff can use the Light Centre as an appropriate location for communication with customers as well as for product presentations. Projects in the region have already been successfully completed in the past: these include lighting solutions for the Yas Marina Hotel in Abu Dhabi, the Museum of Islamic Art in Doha, the Landmark Tower in Abu Dhabi as well as various outlet stores of well-known brands such as Swarovski, G-Star or Geox

Guests at the opening ceremony of the Dubai Light Centre enjoyed an interesting programme including a spectacular light show, a classical concert, as well as fascinating talks. (Photos: Zumtobel)

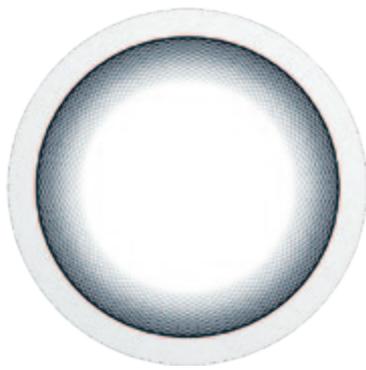


**IF PRODUCT DESIGN AWARD 2011  
– WINNING PRODUCTS: DOWN-  
LIGHT PANOS INFINITY AND FREE-  
STANDING LUMINAIRE OPURA**

This year the iF product design award selection committee was impressed by Zumtobel's Panos Infinity LED downlight and a freestanding luminaire, Opura. The award of the coveted prize reflects Zumtobel's attitude to design – in addition to lighting quality and efficiency. The iF product design award is one of the most significant design prizes worldwide - often functioning as an indicator for new trends and design developments.

The reduced design vocabulary and a luminous efficacy of up to 77 lm/W of the LED downlight series Panos Infinity prove that high quality LED technology has successfully overtaken classical compact fluorescent lamps in terms of lighting efficacy and quality. The design by Christopher Redfern illustrates the potentials of LED technology in the development of a new design language.

This year's iF product design award enjoyed great popularity again. 993 of the 2765 submitted products received an award, 2 of these were Zumtobel products. (Photos: Zumtobel)



The freestanding luminaire Opura combines the latest lighting technology with an elegant appearance. It presents itself as a monolithic structure with a completely jointless lamp head and no visible transitions between the materials. Soft touch operation makes Opura very easy to use. The design-oriented luminaire was created by Peter Andres & ON Industriedesign.

The winning products will be on show at the iF product design award exhibition in Hanover until June 2011.

**ZUMTOBEL GOES MOBILE  
APP AND MOBILE ONLINE  
CATALOGUE AVAILABLE NOW**

Zumtobel joined the mobile world in autumn 2010 with its first iTunes app, the 'Map of Light'. All iPhone or iPad users can use the app to get the latest information about Zumtobel projects and products. The Map of Light presents modern lighting solutions as well as amazing impressions of over 700 projects realised all over the world. A second function provides information about the latest product highlights and naturally also offers an opportunity to get in touch.

Zumtobel has recently also optimised its online product catalogue for use with mobile equipment. The entire product catalogue can now be accessed using smartphones and tablets by various manufacturers. Information about the complete product range is conveniently available on-the-go by calling up the page <http://mobile.zumtobel.com> or the corresponding country-specific page such as <http://mobile.zumtobel.de> in the browser of the mobile device. Since this is not an app, no software installation is required and access is possible using various different devices. iPhone, iPad as well as Android-based mobile phones and tablets are supported. BlackBerry (OS 5 and higher) devices and other modern smartphones can also be used.



Mobility is the major trend of our time. Information about Zumtobel projects and products can now also be accessed on the go. (Photo: Zumtobel)



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Schweizer Straße 30  
6851 Dornbirn/A  
Telephone +43 5572 390-0  
info@zumbobel.com  
www.zumbobel.com

Responsible for contents  
Reinhardt Wurzer

Project management  
Nadja Frank  
lightlife@zumbobel.com

Editorial  
Sandra Hofmeister  
Katja Reich  
Institut für internationale  
Architektur-Dokumentation  
GmbH & Co. KG  
Hackerbrücke 6  
80335 Munich/D

Translations  
Dr. Yasmin Gründing,  
Burglengenfeld/D

Design concept and Layout  
Atelier Bernd Kuchenbeiser,  
Munich/D

Coordination of photographs  
Markus Deutschmann

Coordination HIGHLIGHTS  
Nadja Frank

Production  
Lorenz Mayer-Kaupp

Lithography  
Fitz Feingrafik

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## Project team

Deutsche Bank, Frankfurt/D  
Jens Lohse  
Zumtobel Licht GmbH  
Jens.Lohse@zumbobel.com  
www.zumbobel.de

Levi's, Paris/F  
André Stockmans  
N.V. Zumtobel Lighting S.A.  
Andre.Stockmans@zumbobel.com  
www.zumbobel.be

Museo del Novecento, Milan/I  
Pier Giorgio Bovo  
Zumtobel Illuminazione Srl  
PierGiorgio.Bovo@zumbobel.com  
www.zumbobel.it

EPFL Rolex Learning Center,  
Lausanne/CH  
Alain Gurtner  
Zumtobel Lumière SA  
Alain.Gurtner@zumbobel.com  
www.zumbobel.ch

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suggestions or requests:  
lightlife@zumbobel.com

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