

Press release
Dornbirn, June 2011

DEUTSCHE BANK IN FRANKFURT AM MAIN ADDED VALUE THROUGH INTELLIGENCE



B1 | 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.

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 (DGfB) 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 CO2 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:



B2 | 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.

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 entrance more height, transparency and brightness. The impression is reinforced by the showcase-style entrance portal serving as a connection to the urban environment.

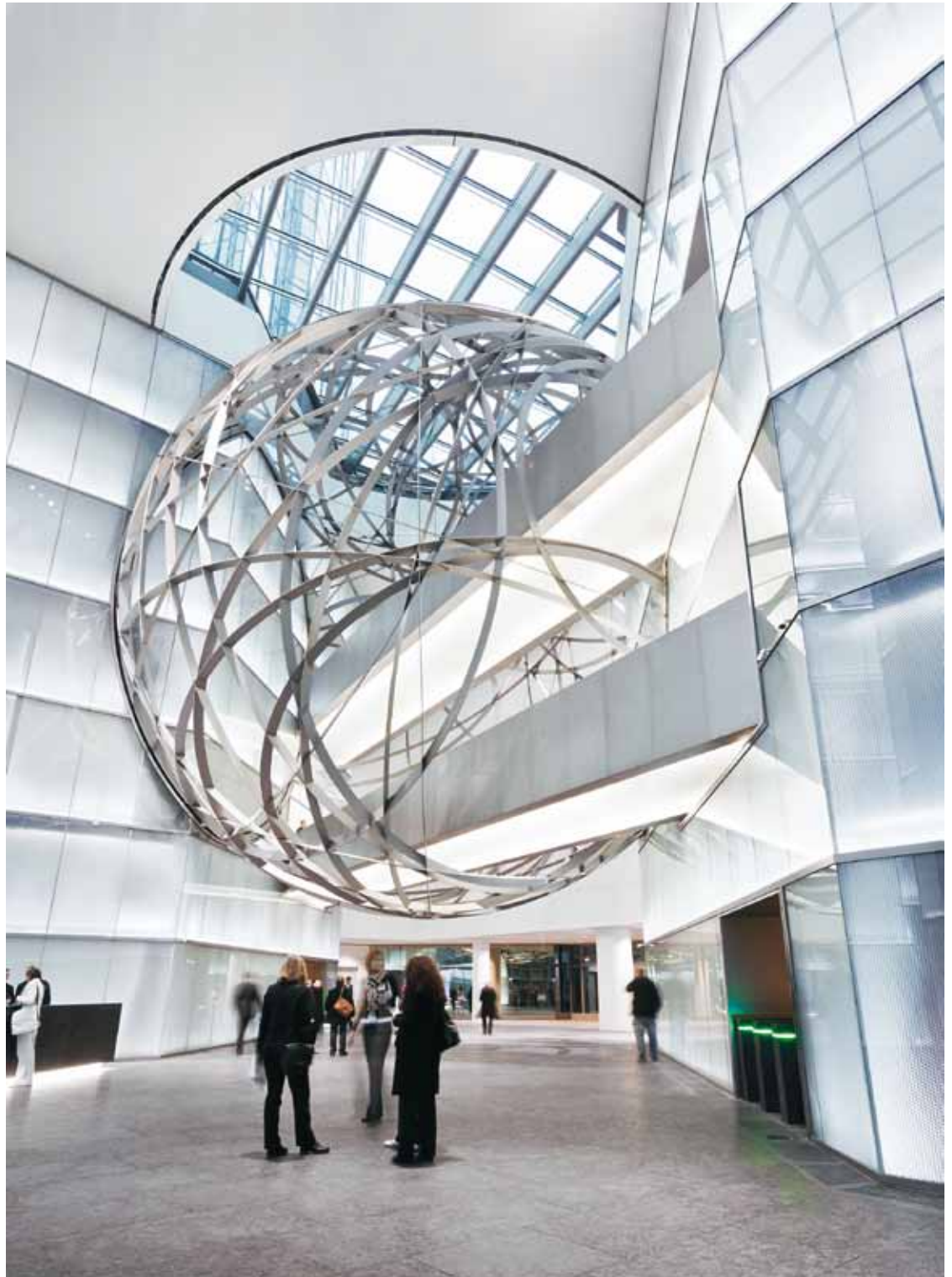
The entire ground floor area is accessible to the public. Services provided here include a new branch of the bank as well as a public restaurant with a terrace facing the concert hall, the Alte Oper. To mark the reopening of the towers, this area was initially used by international artists for a programme 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



B3 | 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.

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.

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



B4 | 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.



B6 I 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.

B5 I 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.

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 Kramb 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/m², and together with the additional table lamps that can be switched on individually, the sword-shaped luminaire solution is well below the 11 W/m² 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



B7 | A pendant version of the sword-shaped luminaire illuminates the work places on the ground floor and other areas.

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 cen-

tral 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.

Fact box

Deutsche Bank AG, Frankfurt am Main/D

Client:

Deutsche Bank AG, Frankfurt am Main/D

Architecture:

Architectural design: Mario Bellini Architects, Milan/
Project execution: gmp Architekten von Gerkan,
Marg und Partner, Hamburg/D

Lighting design:

a•g Licht – Gesellschaft von Ingenieuren für
Lichtplanung, Bonn/D

Lighting solution:

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



B8 | 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.

For more information, please contact:



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