## Bean CHealth, Security, Sustainability Power of Power Lighten Up! By Ole Bouman

Earlier, this magazine has published about the growing role of light in architectural design considerations. Light, when used as a way of understanding the history of architectural meaning, becomes key to understanding how architects 'tell their stories'. The first step in this growing awareness of light was to put their objects and volumes 'under the light', as Le Corbusier put it, letting them be illuminated. Architects then began to program the infiltration of light into the object, explicitly letting their buildings reflect light and become mirrors for their surroundings. Finally, we discussed the ultimate step of architecture wherein buildings do not just reflect, but emit light, engendering buildings to become beacons, highlighting certain constructional elements or telling stories with light that are not even remotely connected to the function of the building itself. It can be said at this point that architecture becomes more a transmitter of messages, than the material container of a program. At least, these dimensions of the life of a building can become completely separated. As previously stated in Volume: through light, the building can broadcast itself, and with the broadcasting of itself becomes the territory for design intelligence.1

The trajectory outlined above, plays within the internal dynamics of the history of architecture. It is a tracing of the emancipation of the built object. Facilitated by the development of a variety of building techniques and materials such as glass, free standing columns, curtain facades, and large construction spans, the building has freed itself with light. As such this trajectory is shaped by the internal dynamics of the discipline of architecture. There is however also a logic from without, a social and cultural context that has fuelled this architectural development and is continuing to do so. Here we make the jump from architectural experimentation, to architecture's response to certain social needs and necessities. I am talking about a whole range of external forces that set new agendas for architectural design, and subsequently led to a the growing popularity of using light to qualify design. To name a few of these forces: An important factor influencing the adoption of light for architectural articulation is due to a technology on 'Architectural push. The rise of large screens, projection technologies, LED panels and the intro-

I. See *Volume* 3, 2005 Broadcasting'.

duction of polymers and mobile structures is changing architecture as we know it, making it less inert and less static. In some sense, this is the emergence of the animated object in architecture. This is not just a matter of employing artificial, electric light, but also about creating new devices to transport daylight into darker parts of buildings, the flexibility of walls and windows, and creating scenarios for interesting interplay. As such, new media are influencing the outlook of architecture just as cast iron, steel, concrete and glass did in the past, by revolutionizing the man-space relationships. Light is ultimately what each of these technologies are either producing or conveying.

—A second external drive is a growing awareness of time. In an age of ubiquitous mobility, it is a truism to say that being at the right place at the right time is all that counts. With increasing capacities for logistical planning and home automation, urbanism and architecture respectively become forms of time management rather than simply spatial accommodations. Space design becomes a time-based design. Since light is in itself a time-based element, either in our consciousness or in the role it plays in our daily routines, using light to temporalize environments is a natural next step.

—Light also has turned out to be an ideal way to overcome much of the rigidity in architectural standardization, providing for both office workers and home dwellers the possibility of adjusting environmental circumstances to personal wishes and criteria. Light in architecture, as before in history, has proven to be an important carrier of individualization. In addition, it helps to increase productivity by enhancing conditions for work and recreation.

—This brings us to another economical asset of light. In the late capitalist age, in which shareholders' interests are more important than the whims of the director or owner of a company and, corporate governance has strengthened its influence on how companies are run, there is an insatiable desire for cost reduction. Cost awareness and financial accountability prevent a lot of straightforward building. Since architecture, by its very material nature, is the most expensive art, there is a natural appetite for achieving its goals more cheaply. Because light offers such a cheap way to achieve architectural effect, it is obviously a very popular alternative for the abandoned material bravura's we know from the past.

—Finally, it must be stressed that societies are shifting from being simple communal organizations to becoming experience providers. In shopping, education, cultural events, or living, many designers approach their projects as creating the backdrop for the experiences of certain end-users. Here the ancient knowledge of creating baroque effects with light-shadow interplay, and the emergence and development of the cinematographic capacities of architectural design, come together in a new mandate for designers. Light has thus evolved from being a natural outcome, to being the starting point of an architectural project.

Light is power. Literally, as the transport of energy, and metaphorically, as the way power decides what needs to be seen and what needs to remain concealed. And since it is power, it is very important to investigate what light can reveal about power: whether power is purely imposing itself on us, or whether it assumes a more benevolent form and creates suitable, agreeable environments. So, beyond simply acknowledging light as an essential component of architectural interventions, it is important to emphasize the ways light can justify power that is associated with positive values. Light, apart from being a function of cost awareness, time awareness, and experience economies, can also lead to beautiful, healthy, safe and sustainable environments. This is how power becomes culture.

Volume collected some examples of this type of power in architecture, of the Architecture of power, according to these aforementioned positive values.



**Brand Light.** On the logo front the Bayern München football stadium is the latest proposition. Basically the Allianz Arena, as it's called after the company that provided the funding, is a neutral whitish 'donut' on a giant scale. It does not communicate anything apart from being large. You could even argue that there is no building. But at night it comes alive, proudly emitting the club colors blue and red. Message, medium and activity merge into one powerful experience.





Reality. The sanctuaries of our culture are quite fetishistic about light. This means totally controlled conditions, resulting in a mix of subdued natural and filtered artificial light. Art needs perfect lighting, everyone agrees – everyone? Some say that the very nature of art, it's relation to reality and the 'everyday', is lost that way. The museum with only natural light is the answer to that observation. Tadao Ando's 'daylight museum' is one of the few to stick to this principle.colors blue and red. Message, medium and activity merge into one powerful experience.





**Usurpation.** From a commercial point of view buildings are (often) expensive logos for companies and brands. Light might be used for bigger impact and effect. Flood light is old fashioned, animation up to date. But why stick to your own building? As celebrities are being used to promote products in commercials, why not capture national symbols, make them yours, covered in your logo dress?

For the 'Grüne Woche', the world's largest fair for agricultural products, German artist Karl Feldmann designed projections on Berlin's famous Brandenburg Gate, January 2006.





**Decoration.** The world is full of 'Mother fuckers' as they are called in todays' architectural newspeak: large buildings, constructions, and objects that stand alone in their surroundings and refer to pure technical requirements. The presence of these power plants, factories, and shipping yards is brutal and unsentimental; they breeze a certain pride for being there, but refrain from being sympathetic or representative.

In the past people just accepted these intrusions, or the owners didn't bother, but nowadays these buildings need special treatment to make them and the company that owns them acceptible. Decorating is the simplest option, light the most efficient solution.





**Selection.** What we like we eat a lot. What we eat a lot is often not very good for us. Eating eggs is one of the purest forms of taking in cholesterol. Genetically modified eggs contain less of this assault on arteries and heart. Light is being used to discriminate the successfully from the unsuccessfully (coloring red) fertile ones. To your health...





**Liberation.** If Miesian space – continuous, transparent, monumental; horizontal and vertical planes hovering in space, tied together with large expenses of glass – isn't an option and the classic solid box – four walls with windows and a roof on top – seems old hat, why not try a fusion? The child of this cohabitation of space and box – intensified universal spot and grounded protective sanctum – is a continuous envelop. Walls become roof and vice versa, skylights are littered all over the skin of the building. The very notion of gravity and its constructive consequences is put to the test. The outcome is a building that presents itself as a 3D catalogue of industrial products. But the effect is that internal space becomes multi faceted and light a liberating force, freeing instead of fixating the interrelation of the objects inside.

'Het Baken' (22 apartments + kindergarten) in Deventer, 2002. Architect: KCAP, Rotterdam.

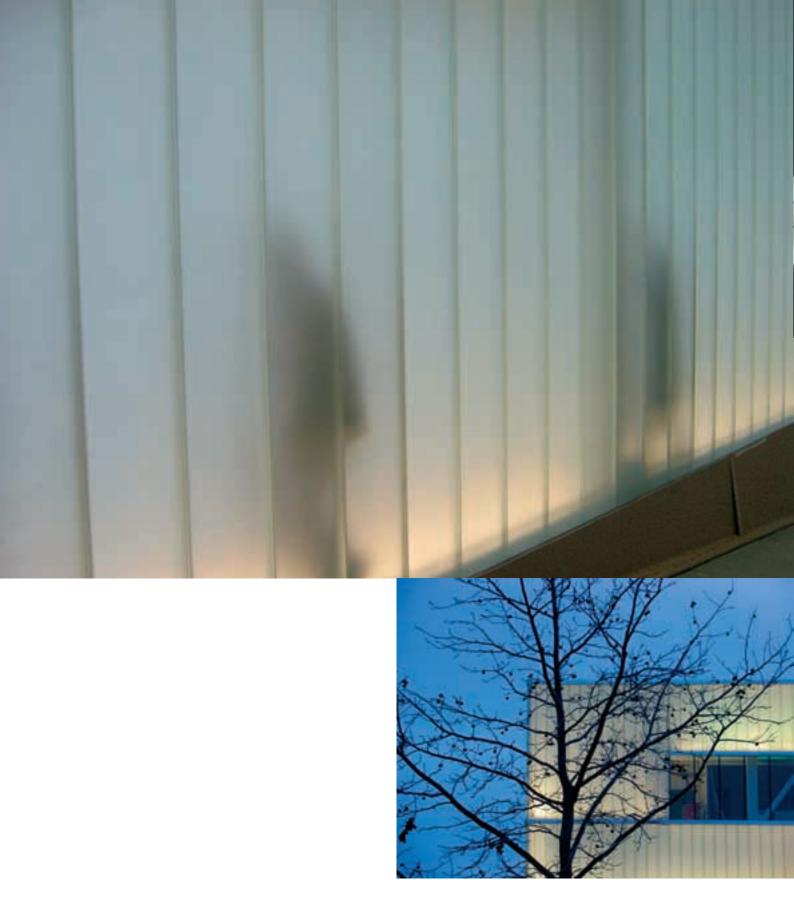




**Experience.** Hi-jacking buildings for commercial reasons are one thing, using architectural spaces for unique experiences another. Take the Tokyo International Forum, an impressive shopping center designed by Rafael Vigñoly. His muscular study in grays – all steel, glass and concrete – was the perfect background for a visual concert by Akira Hasegawa.

Beauty, Health, Security, Sustainability

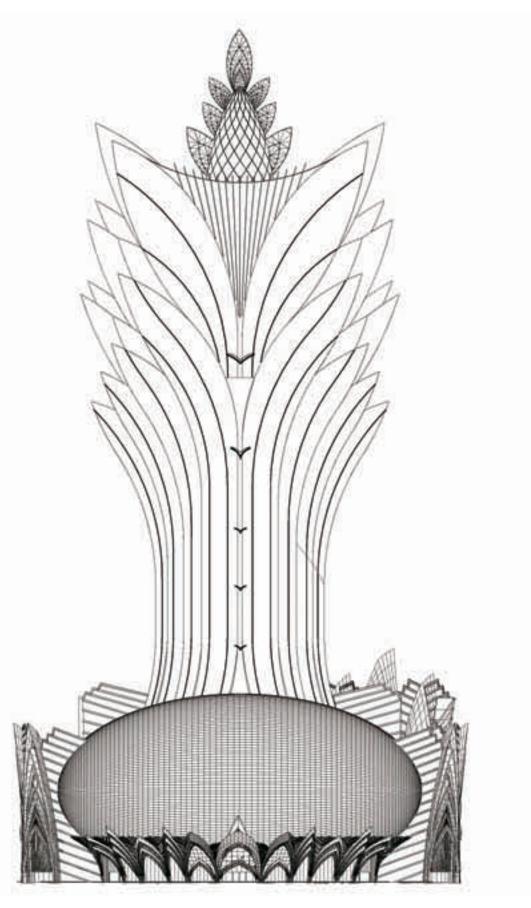




**Transmitter.** The museum is the cathedral of our days. And as in its cultural predecessor, light is the very essence of its meaning. Why not then make a museum that is just about light, that is light? Steven Holl's extension to the classical Atkins Museum building is a light receptor during the day and a beacon at night. All clad in translucent glass paneling (more often used for parking garages) the walls transmit and diffuse natural light in the interior spaces, while at night the buildings become bright glowing Chinese lanterns.

Extention to the Nelson-Atkins Museum of Art, Kansas City (Miss), 2007. Architect: Steven Holl Architects, New York. Five interconnected pavillions extend the existing museum.

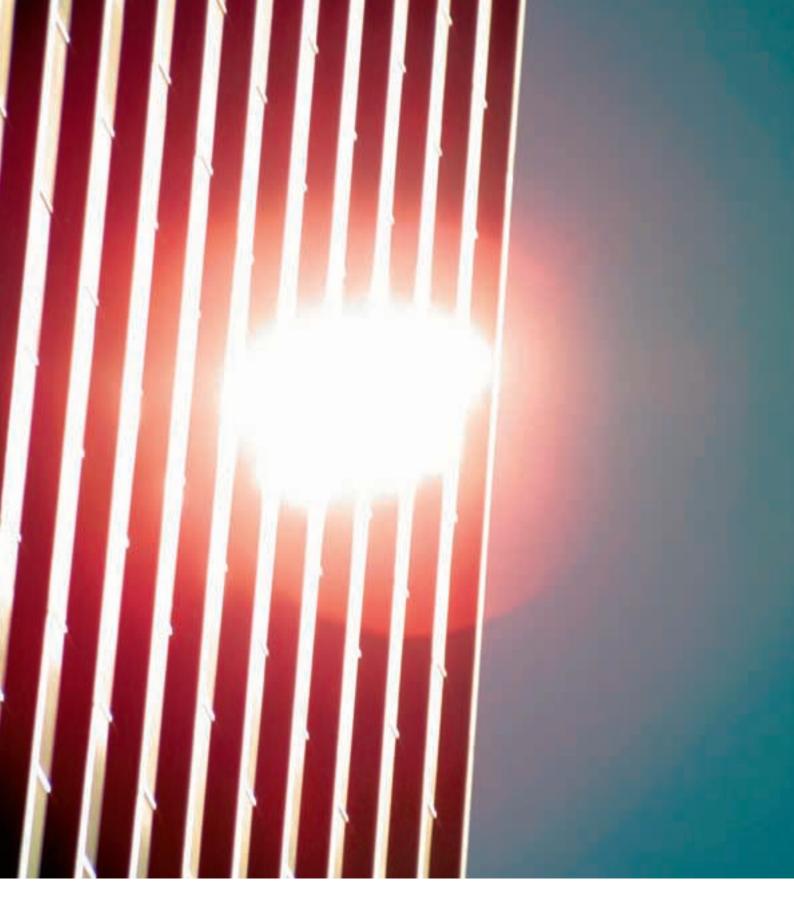




**Seduction.** Light is attractive, a lot of lights, an attraction. Every fair makes use of the rule that bigger is better, and uses light as an affordable medium. Asia is currently the place where the biggest and best is being realized, taking over from the United States.

Take for example this hotel tower cum casino, clad with 8000 m<sup>2</sup> of programmable led covered paneling. The building becomes a super outdoor cinema, showing complete movies on its skin. This is not about 'projection' but about emitting to the max.

Gran Lisboa, Macau, 2007. A 225 m high hotel tower with casino at the base. Architect: DLN Dennis Lau, Hong Kong; light design: Magic Monkey, Brussels.



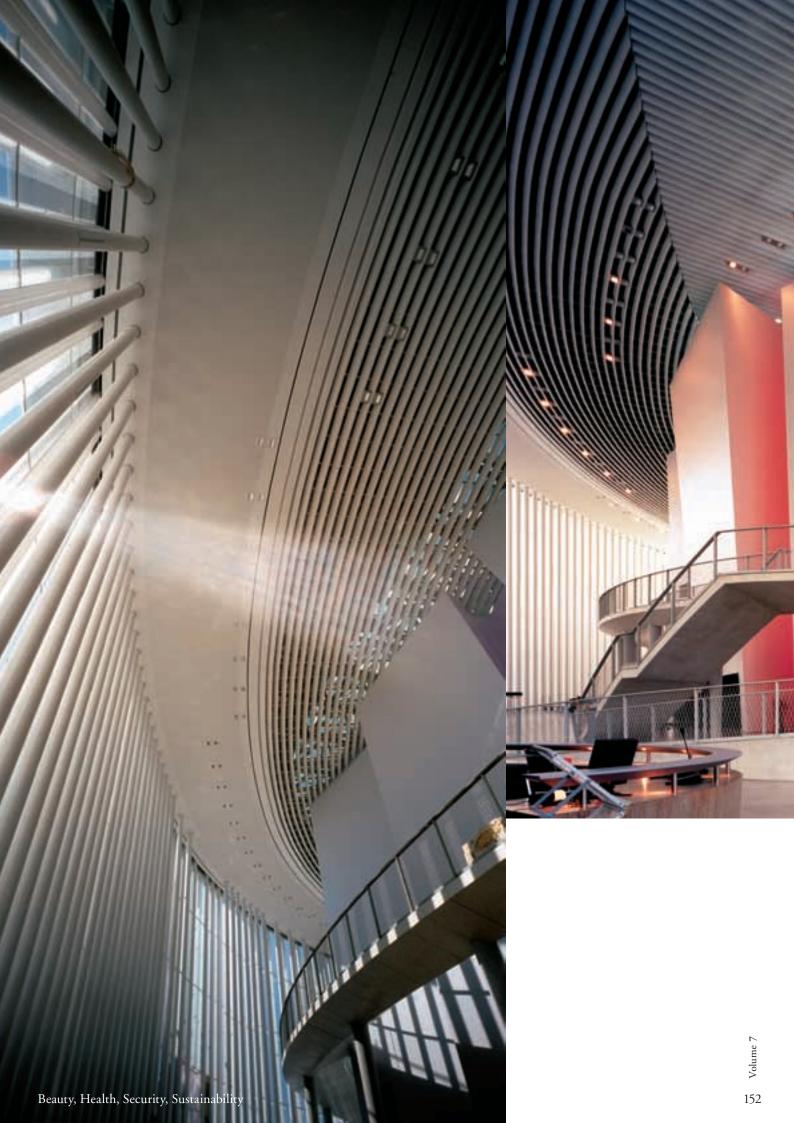
Activation. Man is made for movement. Sitting behind a desk all day is quite unnatural. So is the physical condition in the average office: constant temperature, constant humidity, constant striplight every and all day. The subtle changes of daylight can only be spotted when looking up from the computer screen (and a window within sight). Some people even get ill from such conditions. To make up for this deprivation of stimuli, to enhance the sense of well being, but first of all to improve the performance of the workers, the light industry invented 'dynamic lighting'. It changes in color and intensity during the day. Selling health and happiness by mimicking and challenging the natural...



**Sustainable.** The sustainability debate has favored light as power. As provider of energy that is. Energy that makes the world tick, makes cars run, makes light bulbs glow. If stored light can replace at least some of our 'addiction to oil'. Still experimental solar energy cars demonstrate a possible future. More practical are the photovoltaic solar panels as used at the Forum Barcelona to light the plaza. Even moonlight produces enough energy to power the light bulb decoration.

Forum Barcelona, September 2004. Solar energy car race at Instanbul Park, Istanbul, 2005.







**Light Concert.** The optimal space for classic music performances is the rectangular box. Still, concert halls tend to become ever more sculptural. The Berliner Philharmonie by Scharoun set the tone, Utzon's Sydney Opera House the record.

The recently opened Philharmonie in Luxembourg, a luxurious building, also adds a land mark to the city — another excuse for the EU bureaucrats to maintain this city as one of the EU capitals? The architectural theme of the building is a theatrical play with a miniature city with houses, alleys, bridges, and squares. Light is the material for conveying meaning, form, and space. There is hardly any expressive quality in the choice of the materials themselves. It's all surface, line and rhythm, using light as the main material.

Philharmonie, Luxembourg, 2005. Architect: Christian de Portzamparc.

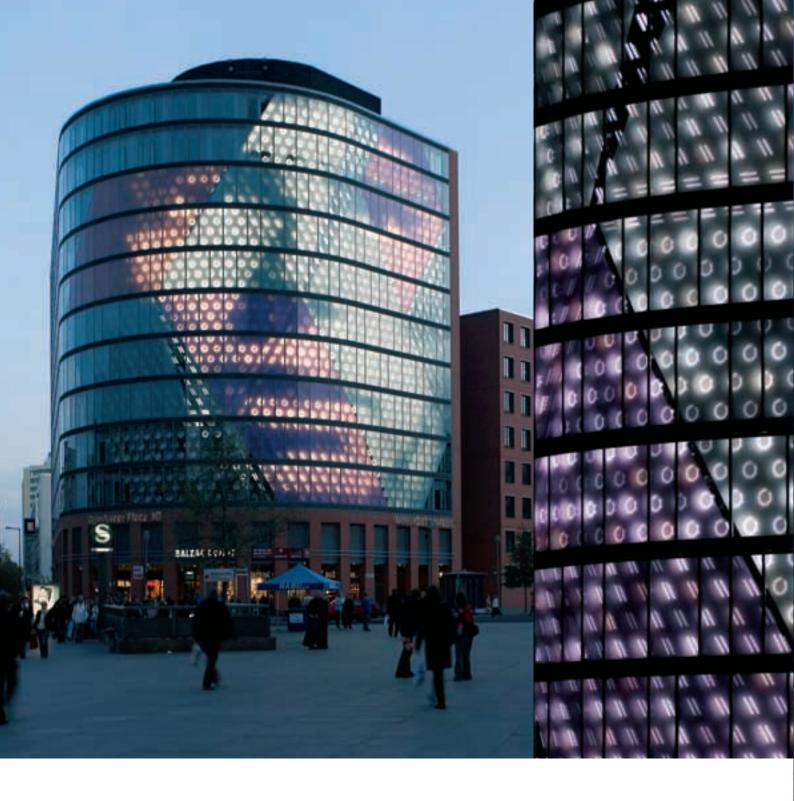
Main concert hall (1500 seats), a chamber music hall (300 seats), and Electro-Acoustic room (120 seats).



**Exposure.** To make things visible we need light, the very light that breeds life. The same light that is destructive, fading and disintegrating what it touches. To create the message 'Complaining is silly. Either act or forget' Stefan Sagmeister exposed this 3 x 8 meter large billboard, covered with newsprint, to the sun for a full week. After removing the attached letters and patterns, the catch phrase was well exposed. During the Expo the message slowly faded away...

Stefan Sagmeister, Complaining is silly. Either act or forget. Billboard for Manifesta 2005, Lisbon. Art Direction: Stefan Sagmeister; Design: Matthias Ernstberger, Richard The. © Stefan Sagmeister



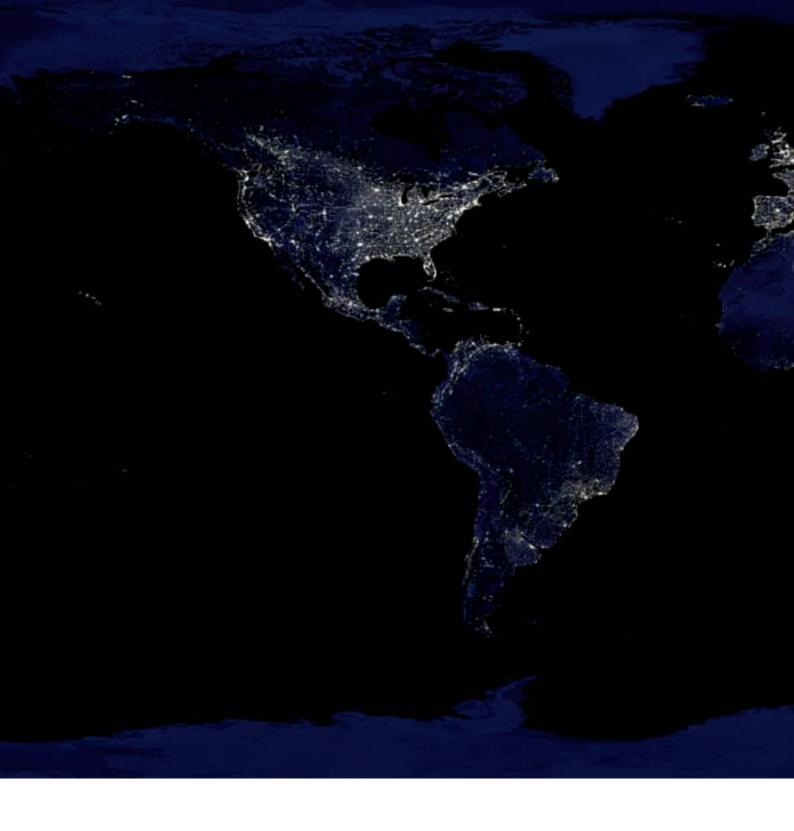


Interaction. The vibrant life of the modern metropolis demands continuous activity during day and night. The surfaces of the buildings cannot escape this rule. Brand space is the common consequence, Times Square its ultimate logo. But in the information age the skin might become programmable and even interactive – light emitting messages, information, dynamic meaning.

Near Potsdamerplatz in the newly built center of Berlin a temporary media façade has been installed on an office building. No 'hi definition' surface of led-lighting, but a 'course pixel' system, that was first used on the Kunsthaus in Graz. During a one and a half year period several artists are given 'the wall' to program this installation. Interactivity with the passing public is an option.

spots, Berlin. Media façade designed by realities:united, Vienna, 2005; commissioned by нvв Immobilien AG. Exhibition as shown: John DeKron with realities:united (November 24 – December 8, 2005).





**Indicator.** At night light makes visible what we cannot see without it. But light is an indicator too. Like heat, movement, weight etc light betrays qualities of a less visual nature: in this case the distribution of economic activity throughout the world. Light as information...

