

International Lighting Magazine 2014/13 **Summer Issue**

luminous

Light + Design

The power of light
Massimiliano Fuksas

A World Première
Ekinox Arena, Bourg-en-Bresse, France



LIGHT + DESIGN

We write the words “Light + Design” on the cover without thinking, as if they are natural twins, two concepts sparked by the same thoughts... We assume that light has only a fraction of its value where there is no design.

How times have changed. Not that long ago, Philips Lighting was a technology company with its main focus on efficiency, the life span of the lamp, and metrics such as color rendition. A tremendously smart team pushed the boundaries of what what technically possible – again and again. We always celebrated design: in the way we shaped our product, in the way we presented ourselves and our brand... But the design of light? Our focus was the technology.

Now that light is fully digital, and the light source has become so much smaller, easier to maintain and less hot, the world looks different to us. The values of light beyond illumination (we wrote extensively about it in the last edition of Luminous) are tremendous and we learn more about them every day. Technology no longer merely enables efficiency, but offers us a whole new view of light and humanity. The ways in which we play, work, sleep and interact are all related to the light around us, and to the way that we design it.

Our luminaires are now more inspiring, and encourage you to do more with light: to design it. And, by becoming involved with projects and offering design as a service to our customers, we are discovering a whole new world in which we can offer you our collaboration, our support and our unique expertise. This is a collaboration with one goal: to create — quite simply — “the best light” as Tim Zeedijk, who is head of presentations at the fabulous Rijksmuseum in Amsterdam, put it so concisely.

In this 13th edition of Luminous, you will find plenty of inspiration to help you start thinking of Light + Design as each other's natural twins. Our interview with Massimiliano Fuksas is about “light as structure”, about the magic of light and Fuksas's luminaire designs. And I am delighted to cover the Luminous Talks, our collaboration with Parsons The New School of Design in New York City. We even reveal the design secret behind our new logo, the Philips Shield. Have a wonderful read, let me know what you think about Luminous, and be inspired!

Rogier van der Heide

PHILIPS

colophon

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cover | 18 Septemberplein, Eindhoven, Netherlands – “a blob that plays with reflection” Massimiliano and Doriana Fuksas Architects **photo** | © Rob 't Hart Admirant **more info** | luminous@philips.com

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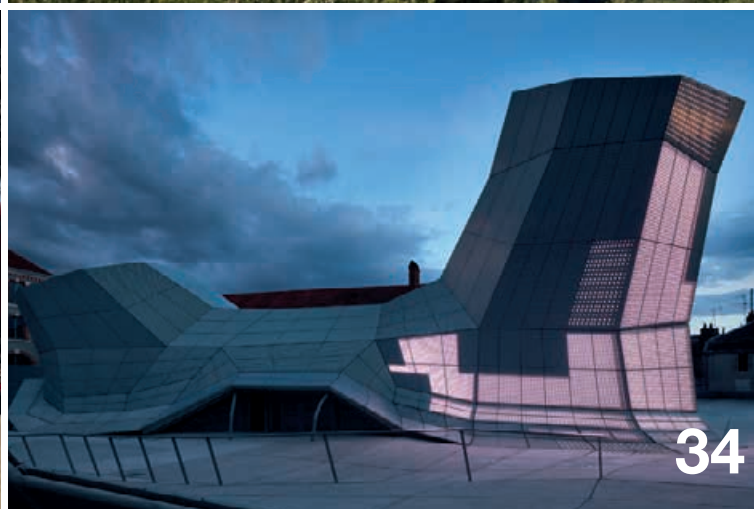
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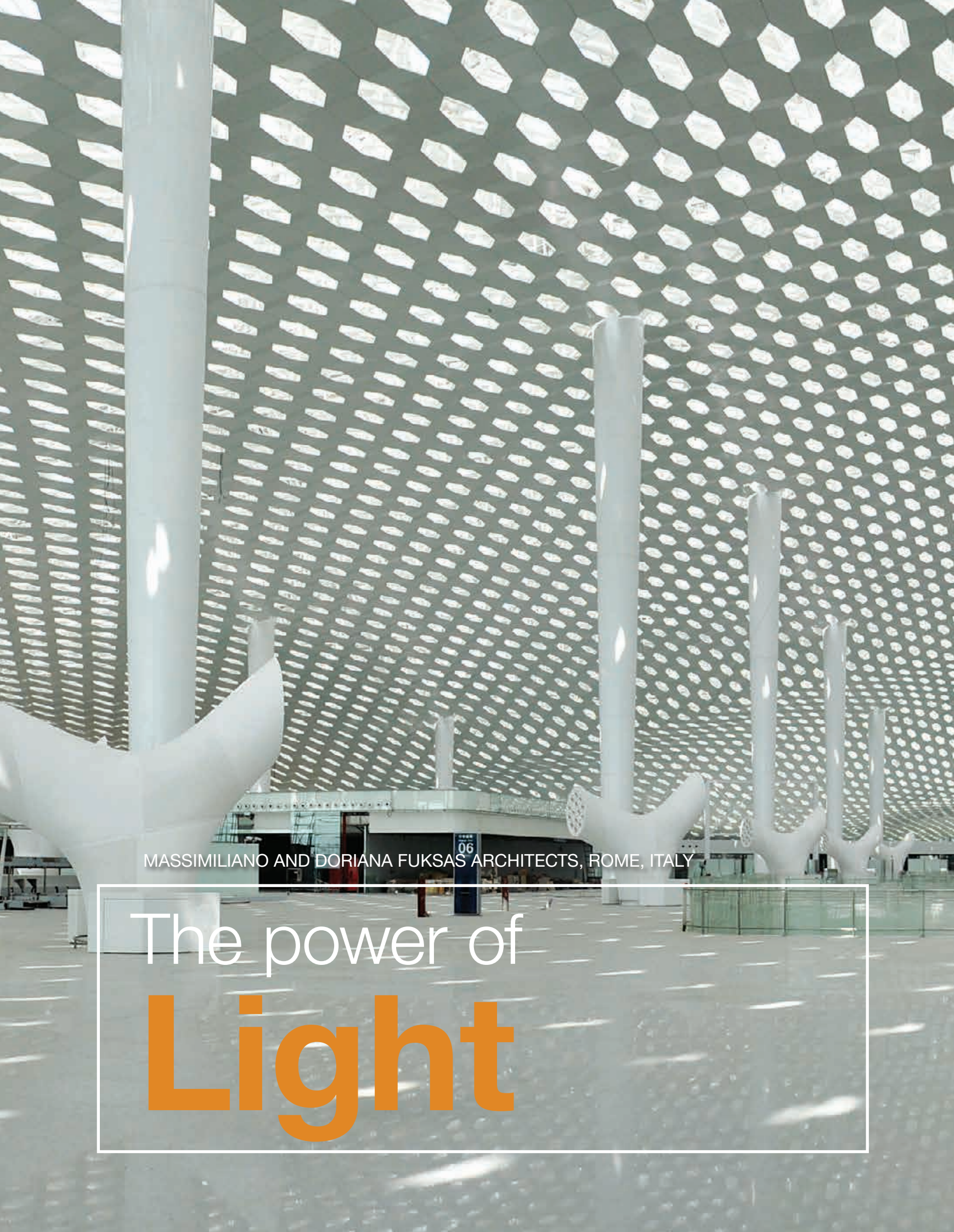
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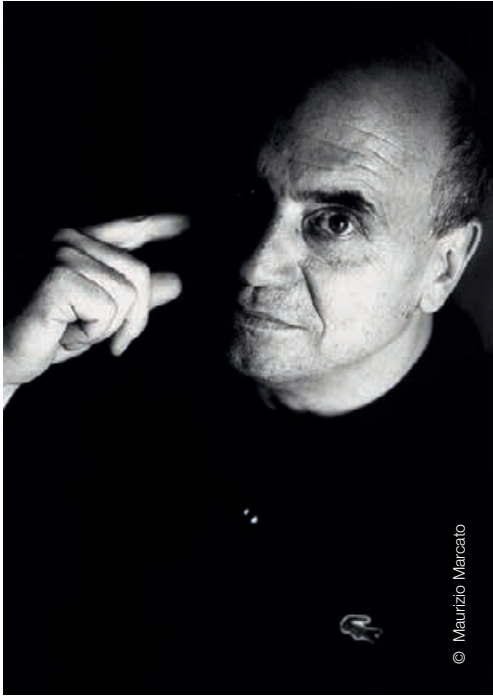
The image shows the interior of a large, modern architectural space. The ceiling is a complex, white, perforated structure that allows light to filter through, creating a pattern of light and shadow on the floor. Several white, column-like structures are visible, some of which are integrated into the ceiling structure. The floor is a light-colored, polished surface that reflects the light. In the background, there is a glass-enclosed area, possibly a train platform or a public space. The overall atmosphere is bright and airy, emphasizing the play of light and shadow.

MASSIMILIANO AND DORIANA FUKSAS ARCHITECTS, ROME, ITALY

The power of **Light**



The new Shenzhen airport is a building that has been conceived as a landscape.



Massimiliano Fuksas

Entrance to underground bicycle parking at 18 Septemberplein, Eindhoven, Netherlands
“a blob that plays with reflection”

By Luigi Prestinenza Puglisi

Massimiliano Fuksas, one of the most respected international architects, uses light as a design tool.

Luigi Prestinenza Puglisi went to his study in downtown Rome, near to Piazza Farnese, to learn more.

What does light mean to you?

Massimiliano Fuksas: I strongly believe light is one of architecture's certainties. Without light there would be no colours, but only darkness. Light is the prime resource you think of when you are designing.

Are you referring to natural light?

Especially to natural light. The more you can capture, the better. Of course there is artificial light as well, but if it were possible I would want natural daylight 24 hours a day.

What about artificial light?

It's very important, but it should come from within buildings. As a matter of fact, I've never used a light to illuminate a building from the outside. Light should be encased by the structure, not vice versa, otherwise you run the risk of falling into rhetorical special effects. The worst monuments always have an external light that thrusts them out of the surrounding reality in the worst way.

In short, buildings are lamps...

Exactly, they should be at night. Look for example at the photos of Shenzhen Airport, in China [the architect points to a big panel hanging on the wall with various photographs of the airport under construction]: simply through the shape of the object you can perceive the lamp effect.

If I am not mistaken, the church in Foligno is a work in which light plays an important role.

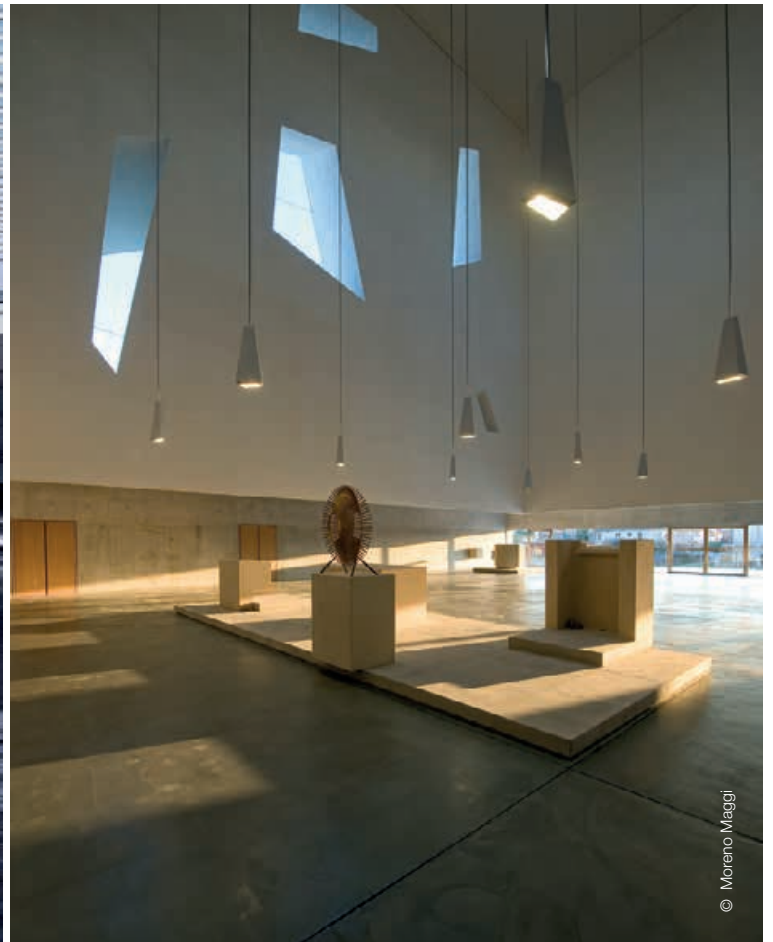
Yes. In that project I have tried to bring light inside through channels, much like Le Corbusier's "light cannons". These glowing elements are part of the structure, they sustain the church's internal volume. It's a light we can define as "structural".

Structural?

You must know that I hate skin and façade: the idea that there can be an outer skin that simply conceals. An organism is a whole, there mustn't be a rigid distinction between interior and exterior. This is the new role for light: connecting the inside and the outside. Even in Beijing, with a recent project for the Central District, we are trying to carry out this theme. Speaking of which: what great energy there is in China now! The project was developed in 2013 and will start in 2014. It's a sloped tube with one face overlooking the park, thus absorbing its reflection and, consequently, light. At the centre there is a 600m-high tower, which will be built by BIAD.

When do you use direct and when do you use reflected light?

Direct light is to make space stand out and make it meaningful. Indirect light is for diffused lighting. There is also a third kind of light...



Top left: The Fiera di Milano building uses the translucency of glass to create extraordinary patterns.
Top right: St. Paolo Church, Foligno, Italy.
Above: Armani Fifth Avenue, New York, USA.



© Luca Casonato

A third kind?

Yes, it's the magical light that shines miraculously through a window opening that shouldn't have been there or through a corner. Without this magical light, a building would not be architecture, intended as a poetic work.

Do you work with lighting design consultants?

Not always, normally we work on it ourselves. Sometimes I collaborate with the London and Scottish firm Speirs + Major. The new partner of the firm, Keith Bradshaw, is great. We've worked on many buildings together, among which are our projects for Armani in New York and a 300m tall skyscraper in China.

Tell me about Shenzhen Airport...

Shenzhen is a project which has been built quickly and successfully, after three years of construction and one year of design. In that way it is similar to the "Fiera di Milano" project, which was designed in six months and built in 26 months.

So light is the airport's appeal...

I agree and as you see [he points again to the panel with the pictures] it was that way even one year before it was completed, because the structure has been thought of in relation to light. Rather than a building, it is a landscape that recalls my passion for dunes and lakes.

Some say it is shaped like an aeroplane...

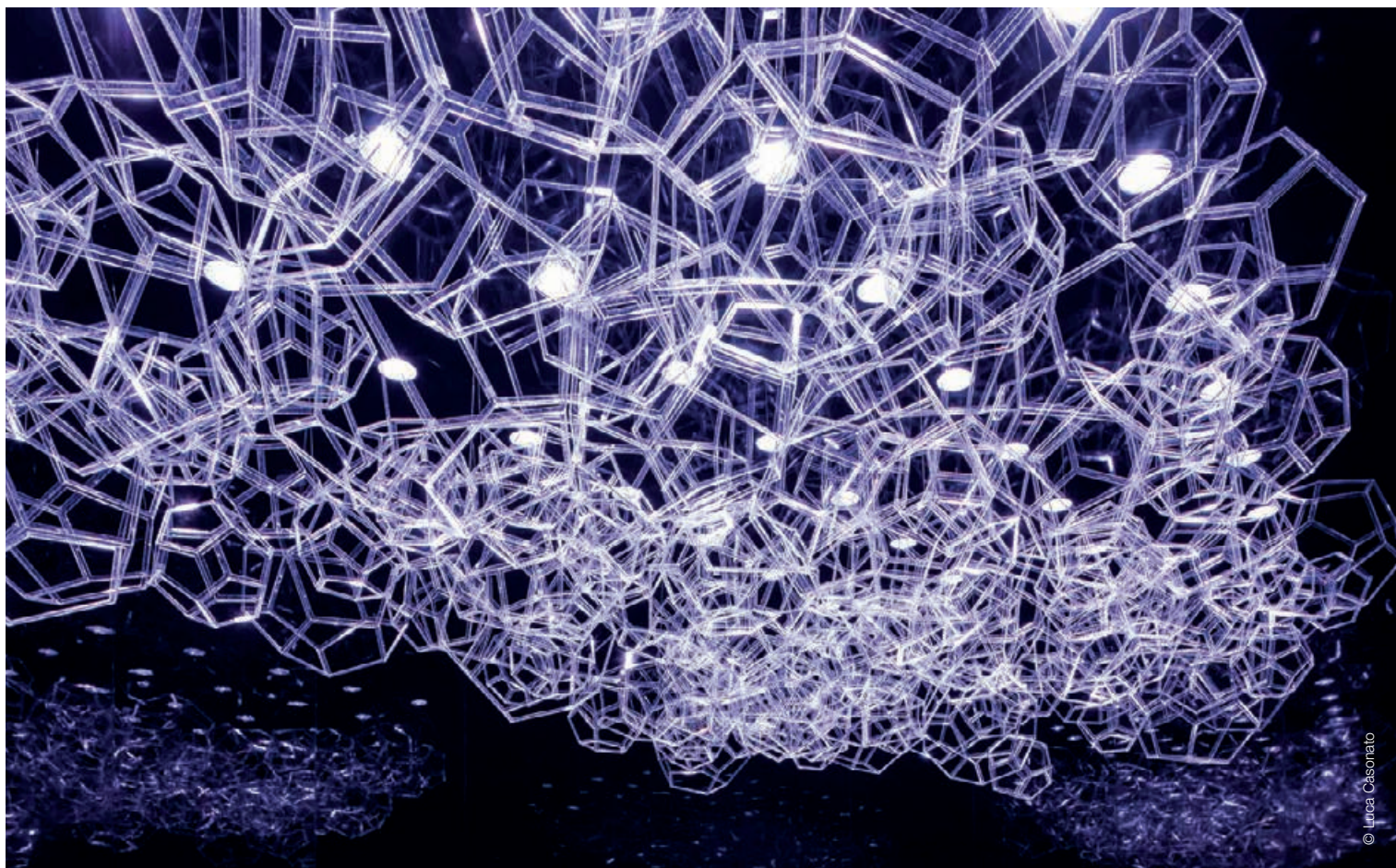
No, it isn't: it's inspired by a fish, the manta ray [he unfolds a sheet of tracing paper and he draws the outline of a manta]. It's a sinuous mark that morphs into something else: a building. It is a transformation from an organic form to a more geometrically precise shape [with another pen he defines the lines he has just drawn] and I believe that this is one reason for its success. It's been in many publications, all over the world.

Maybe because it appeals to a universal taste?

Yes, maybe because it involves feelings. On the day of the inauguration, it was very exciting for me to see that most of the people who had entered to take the first flights, were pulling out their cell phones to take pictures of the interior, as if they wanted to make it theirs.

What do you think are today's tendencies in the field of lighting?

I believe the issue today is that we often have ugly light sources and we therefore try to conceal them. It's rare to encounter lamps as beautiful as Castiglioni's or as those designed in the Fifties and Sixties. What's more, designing a lamp is hard. By simply existing, a lamp goes against two concepts: the minimalist one to create objects that are almost non-existent and the baroque one for which the object is never decorative enough.



Opposite: Massimiliano and Doriana Fuksas designed the Candy collection of lamps for Zonca.

Above: The geometric lamp design is reminiscent of fractal geometry.

Are you designing luminaires?

Yes, Doriana and I are designing two of them, one for Venini and the other for iGuzzini. Venini is one of the last great artisans. He is able to give his products that magic that, as I was saying, contributes to make lights' fortune. Actually, hold on [he goes into the next room to get a book]: I am giving you this book, "Object", which showcases the firm's work on object design. We have never been specifically involved in this activity, but we've discovered that over the course of time we have designed many products.

Which is the luminaire you're most fond of?

A while ago we designed a luminaire for the Fiera di Milano, made of combinable polyhedrons that could create huge aggregations. Perhaps in the future I would like to design a luminaire that grows organically. The only caution is that a good structure, even if made from single parts, mustn't appear to be just the sum of those parts, but rather as a whole, much like fractals: a module with no unity has no appeal.

Do you use Philips lamps?

Yes, I've used them often, especially for projects in France and Germany. I've also built in Eindhoven, next to the Philips headquarters. It's an organic shape, a blob that plays with lights' reflection.

Website

www.fuksas.com



PAULINA VILLALOBOS, LIGHTING DESIGNER, SANTIAGO, CHILE

Embracing **the night**

Chilean lighting designer Paulina Villalobos, founder of DIAV, has a particular interest in the way that we light our cities after dark so as not to destroy our relationship with the night and the stars. This led her to set up an event called Noche Zero, which changed thinking.



© Massimo Tarenghi

Participants in the Noche Zero event in the Atacama desert, Chile.

By Ruth Slavid

How did you first become interested in light?

Paulina Villalobos: I originally trained as an architect, and I qualified very young. I won a competition to design a cultural centre outside Santiago when I was only 25 years old, and I felt very humbled and lucky. I thought about the light in the building and I realised how little I knew. There was not much information available and very few professionals in Chile.

So I decided to go abroad. I went to Germany for two years and studied architectural lighting design in Wismar. When I was studying, I realised that it was a fantastic subject. Then I went to the KTH in Sweden for a year and to Finland, as well as to Paris following great professionals (Vesa Honkonen & Luis Claire). I finished my

training by deciding to come back to Chile and to start my own company in 2005.

What is your understanding of people's relationship to light?

My approach is through my experience of nature. I think that it is a very instinctive relationship – that the light has to appeal to your chemical instincts. It affects your emotions.

How do you see the relationship between artificial light and the sky?

I grew up in the Atacama region of Chile, which is supposed to be the place in the world with the clearest skies and the lowest humidity. Everywhere that I moved I found that there is a different understanding of what is normal in terms of light. Living in the north of Chile, I am very aware of this as the

country has more than 30 different climatic zones. Everywhere in the country the levels and the geometry of the sunlight are very different.

In Spanish, for example, there is no word for “glare”. For people who live a long way from the equator, the word blue is associated with being sad, yet in Spanish and Portuguese it is associated with happiness. This different appreciation of the sky and of natural light affects the way that we work with artificial light. For instance in the UK, if you used a colour temperature of 6000K, people would hate it. In Sweden it doesn't even exist. But in the tropics it is quite common.

The light was designed for the car, and we keep thinking of lighting as something for cars and not for people.

Below: from left to right, Maria Cirano, Paulina Villalobos, Bernardita Iguait, Barbara Cordoba.



How do you balance the need to light buildings and the need to respect darkness and the night?

There is a dilemma. We want to put light everywhere to make our buildings look beautiful, to make our buildings dance, but we also need to respect the night. Our rejection of the night has different aspects. It is easier to see but we are losing the stars – we are losing that part of our heritage. So it is important to light the building to have the maximum effect on the people who see it. The clever thing is to know how to do this but be less invasive.

If you believe we should have less light in our cities, how will you address people's fear of the dark?

In general the people who light our cities don't understand light. The result is glare,

and very high contrast. At night our visual system works differently, almost as if we have another pair of eyes. Our cones are sleeping and we rely on our rods, which are very attuned to detecting movement but very lazy in terms of colour. The rods need very little light. For lighting designers it is a problem to make others understand this.

What about the battle against light pollution?

The people who are just against light pollution don't understand light either. They think that we should just turn off the lights. In order to design with light at night so that it doesn't go everywhere, you have to be a professional. Otherwise you get the problems that we have today, where you can see the light pollution from many cities from up to 40 km away.



© Maria Cirano



Top: The Milky Way was easily visible at the venue for the Noche Zero event.

Above: Telescopes are placed in the Atacama Desert because of the clear skies and lack of light pollution.



What is Noche Zero, and why did you set it up?

The idea was an initiative to make everybody aware of the value of the night, connecting different professional approaches. A lot of mistakes have been made in lighting our cities since the 1950s that still haven't been put right. The light was designed for the car, and we keep thinking of lighting as something for cars and not for people.

We wanted to make a better future for our cities. So we brought together scientists, astronomers, regulators and other people involved in thinking about light. The first event was held in October 2012. The idea was to talk about human health, about the environment and about the culture of our cities.

We held the event in the Atacama, so that people could see what they were missing in terms of enjoying the night and the stars. It's very special and very beautiful, close to the best observatories on earth.

Was it a success?

It was very interesting. The astronomers, for example, didn't know that it is possible to light cities without causing light pollution. And as a result of the event, regulations have been rewritten so that they are better, so that they approach light from the human point of view. We formulated a manifesto that is called the Atacama manifesto.

What happens next?

We fundraised to put a conference together and we are working to put all the knowledge online so that it is free. Now

we are fundraising to put together another event which will happen on April 21st, 22nd and 23rd 2015, new moon and starry night in Atacama, and this time we want to invite the people who make the decisions, managers and urban planners. The mistakes are always made because people don't have enough knowledge.

Should we be embracing darkness?

The night is actually full of light, if we use the right amount of light. In the daytime we are used to having light from the sun, which is full of ego and personality. At night there is another kind of light which is more humble. It is a different kind of light which doesn't need to shout.



© Maria Cirano

If we can deal with the light pollution produced by our cities, we will be able to enjoy the magic of starlit skies again.

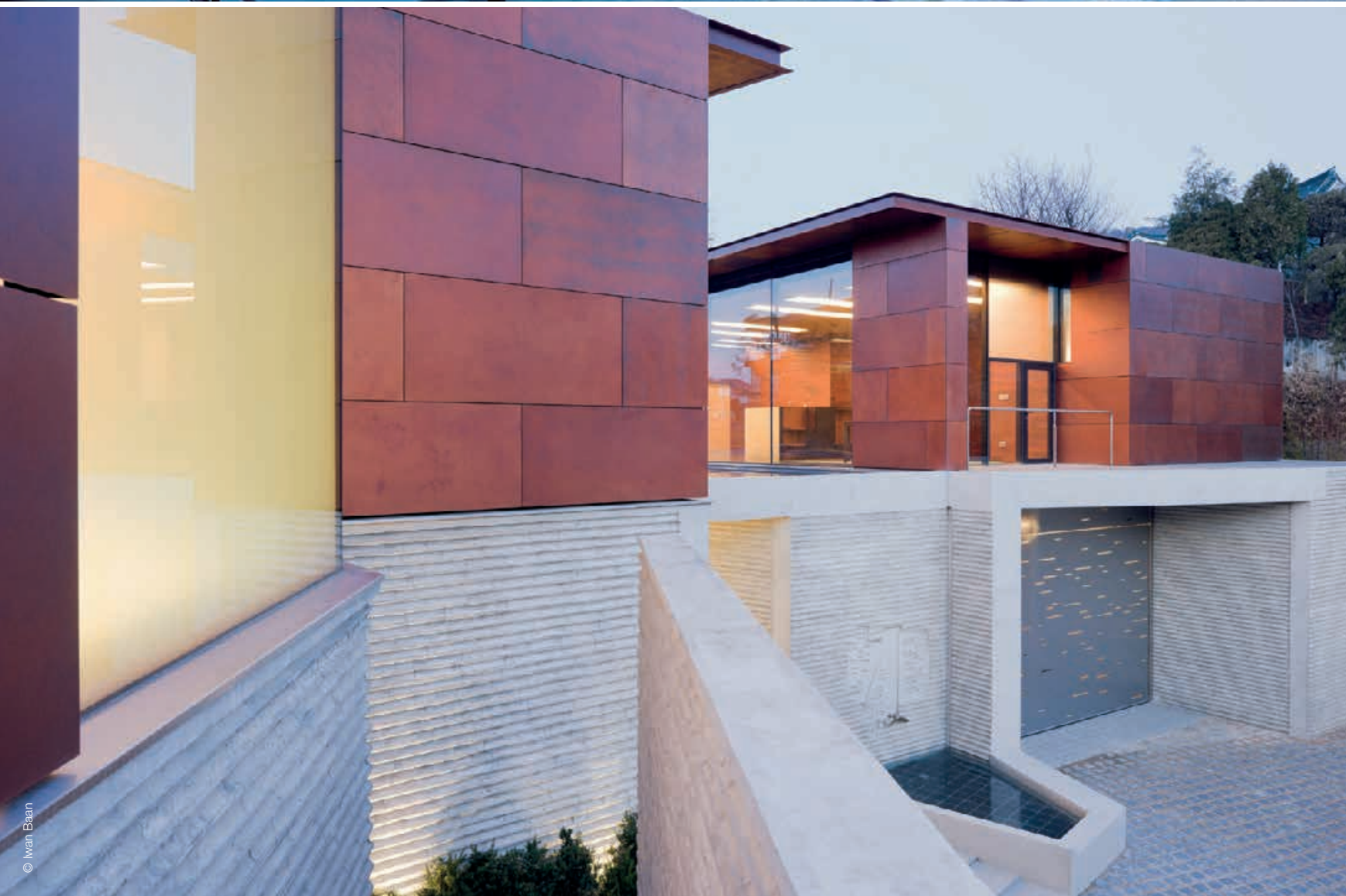
What is the best way to avoid light pollution?

In our work we do a lot of calculation to prove that we are avoiding light pollution. We simulate a layer on top of our buildings, and make sure that no light is going up through that. It's easy to get it right, you just need to think more.

Website

www.diav.cl

www.nochezero.org



PARSONS THE NEW SCHOOL FOR DESIGN, LUMINOUS TALKS, NEW YORK, USA

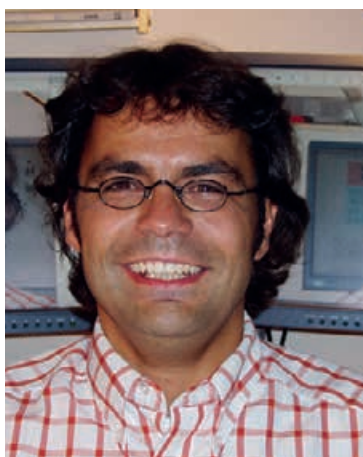
How does design influence our choice?

By Ludmila Svystunova

By incorporating natural elements into architecture or building upon the knowledge of the human mind, designers can shape our perception of space, argue Noah Yaffe, a partner with Steven Holl Architects, and Raymond van Ee, a principal researcher at Philips, in their Luminous Talks presentations.



Noah Yaffe of Steven Holl Architects



Raymond van Ee from Philips

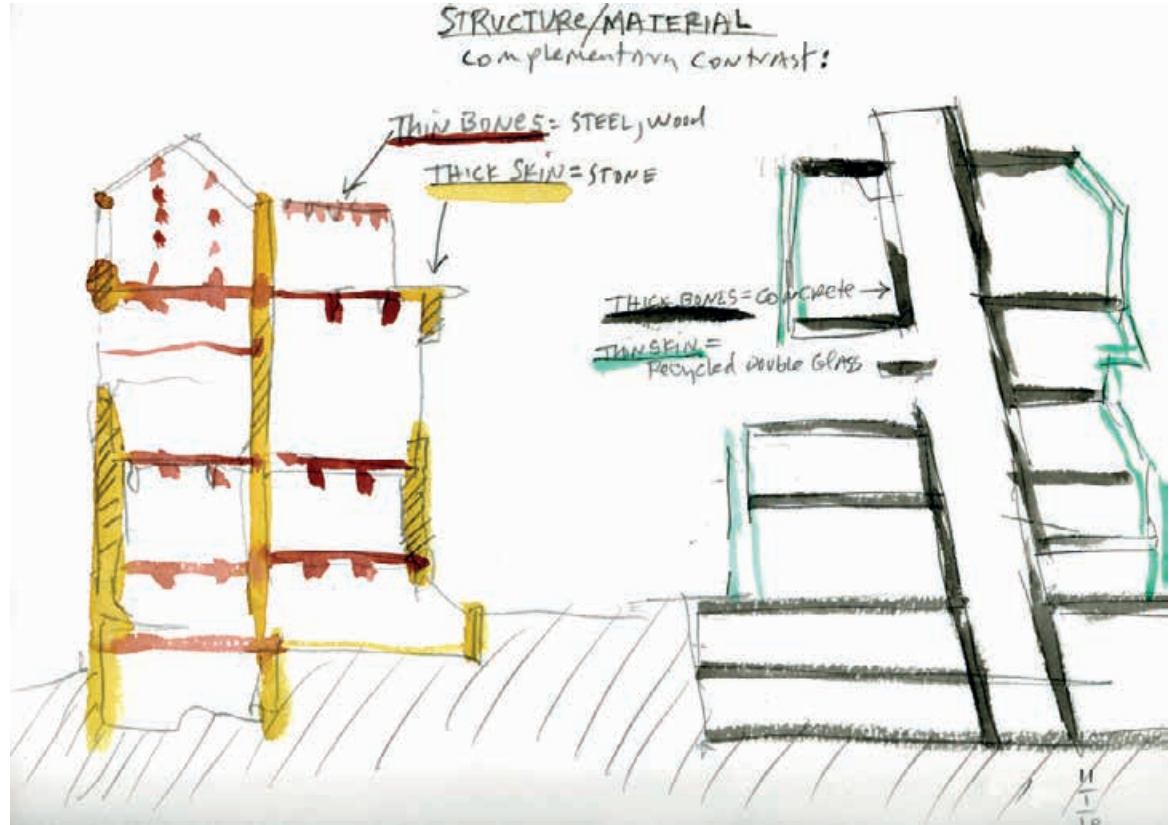
Noah Yaffe: Blending design and nature

The embrace of phenomenological aspects of architecture and perception has always been at the core of Steven Holl Architects' practice. The philosophy of the firm is encapsulated in a passage from *Anchoring*, a book by Steven Holl, "Architecture does not so much intrude in the landscape as it serves to explain it. When the work of architecture successfully fuses a building and a landscape, a third condition emerges. Light, shadow and shade, its different sources, its opacity, transparency, translucency and conditions of relaxation and refraction intertwine to define or redefine space. Light subjects space to uncertainty". Another quote, taken from Hall's *Parallax*, stresses the role of "enmeshed experience", where the object and the field merge, as "an elemental force of architecture." Yaffe emphasized the idea of multiplicity, explaining that the countless viewpoints of being in a space, and of one's body being in the space, could help to shape one's understanding and perception. These ideas were illustrated with the firms' projects in Asia and Europe.

The Daeyang Gallery and House in Seoul, South Korea is a remarkable intertwining of landscape, art and architecture. The project reflects the idea that unexpected phenomena can emerge when natural elements are integrated into architecture and the building is integrated in the landscape. The cracks in Daeyang's frozen pools in the winter and the intermingling of natural and artificial light in the living spaces are examples of such unanticipated effects.

Left: Steven Holl's Daeyang Gallery and House in Seoul integrates the building in the landscape.

The new Glasgow School of Art building sits directly opposite the seminal building of the Mackintosh School of Art. The architect chose to create a complementary contrast between the two buildings.



© Steven Hall Architects

The Horizontal Skyscraper in Shenzhen, China, rises 50m above the ground. The project influences one's perception of being in a public space through the effective use of colour, inspired by Chinese architectural traditions, and highly reflective materials. The resulting perception of levitation differs during the day and at nighttime, when the fractionating conditions are activated.

Another project in China, Sliced Porosity Block, built in Chengdu, was renamed Time Light by the locals. It illustrates the notion that some buildings are shaped by invisible forces and the specificity of vision. The complex is shaped by cuts that allow daylight to enter the neighboring buildings, and its perception is changed entirely by the condition of the night. During the night the tubes of light, designed by Lebbeus Woods, become dominant. Combined with them, the highly reflective material of the building gives the impression of one's body being suspended in space and influences visitors' perceptions of up and down.

The Knut Hamsun Centre in Norway is inspired by the famous author's writing and controversial reputation. Above the Arctic Circle, there is no sun at all in December and January, and then there is a moment in the summer when the sun does not go down. This project incorporates those predictable light patterns along with the unforeseen ones and demonstrates how these can create a unique spatial experience.

The new Glasgow School of Art building sits directly opposite the seminal building of the Mackintosh School of Art. The architect chose to create a complementary contrast between the two buildings. For instance, the lack of exterior details on the School of Art is intended to balance the many details on the School of Architecture. The new building also employs the unique qualities of Glasgow light, with daylight brought in through large tubes cutting through the building, as well as a sky exposure plane.



© Iwan Baan



© Steven Holl Architects

Top: The Knut Hamsun Centre in Norway responds to the extreme light patterns in the Arctic Circle.

Above: Steven Holl's Horizontal Skyscraper in Shenzhen, China, uses colour to influence perceptions.

When designing spaces, it is necessary ... not to interrupt the natural clock

Raymond Van Ee: Using research in design

Raymond van Ee is an expert on how the brain processes sensory signals. According to van Ee, architects and designers could make the most of human perception by explaining the psycho-physiological mechanisms behind it. His talk focused on two main themes: our propensity for selective perception and the peculiarities of the body clock.

Attention, argued van Ee, is selective and restrictive: we only perceive a small part of all the incoming information, and in the visual process a lot of information is filtered out. As a result, it is easy to miss something if you are not looking for it. Furthermore, our brain has built-in interpretations of some objects, and it is difficult to see the real image or perceive depth if what we see does not conform to our expectations. These ideas can be illustrated with optical illusions such as the famous Ames room, the Necker cube and a rotating 3D mask, which show the propensity of the human brain to take shortcuts. Employing the help of researchers could be of use: by measuring brain activity they can tell what we are actually seeing.

Humans are also constantly assaulted by multiple stimuli. Various kinds of information from the cortex are competing to be the main focus of attention. Van Ee showed how focus could be increased through synchronization of different stimuli, such as audio and visuals. "A percept that is supported by multisensory synchronous signals grabs more attention, entailing quicker performance",

he explained. This idea, supported by various academic studies, can be of use to designers. They can reinforce our concentration on certain elements in the space through the use of multisensory models.

Turning to the role of artificial and natural light, these can have an effect on the human body clock. Blue light influences the production of melatonin. This means that being presented with too much blue light in the wrong part of the day will disrupt our rhythm. On the other hand, personalizing lighting patterns to suit their circadian rhythms can help people with a shifted pacemaker (for instance, psychiatric patients), to shift their clock back to normal. When designing spaces, it is necessary at least not to interrupt the natural clock, and if possible, to help with its regulation.

For designers, the implications of Raymond van Ee's talk are twofold. First, they need to create a multisensory experience to direct the attention of people who enter the space in an optimal way. Second, they need to be considerate of the body clock and not disturb its natural rhythm.

Both talks stressed the importance of creating multi-sensory experiences for the end users of architectural projects. Indeed, to echo the words of Steven Holl, "architecture is manifest in perception".



EKINOX ARENA, BOURG-EN-BRESSE, FRANCE

A World Première



By Isabelle Arnaud

The ProB Basketball team of Bourg-en-Bresse (France) is proud of its new sport centre for three reasons. First, of the architecture of the building, second, of the facilities adapted specifically to its needs, and last but not least, of the lighting. The indoor arena is equipped with the latest technology: the ArenaVision LED floodlighting system, installed for the first time in the world.

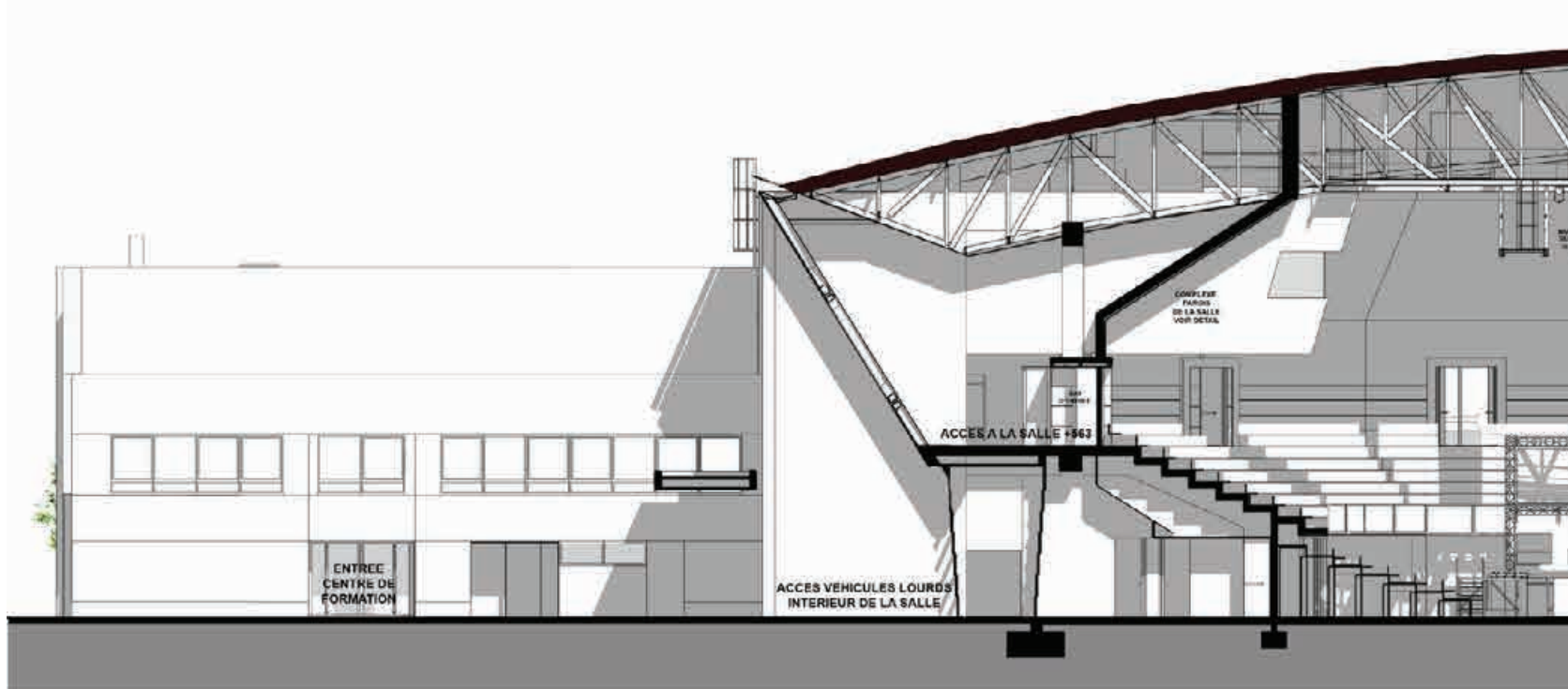
In 2011, Bourg-en-Bresse Agglomeration (BBA) decided to renovate its exhibition centre Ainterexpo, consisting of three halls built in the 1970s. BBA added a fourth hall of 9,940 m², which opened in January 2014. Called “Ekinox” in reference to the equinox, the times in the year when the sun crosses the equator and days and nights are of equal length, it conveys an image of an illuminated half-sphere. This chimes with the architecture of the building, which employs simple and fluid curves. Ekinox hosts sporting events, including basketball, business events such as exhibitions, concerts and entertainment shows.

High lighting requirements for TV

The balance between day and night to which the name Ekinox refers symbolizes the versatility of the building, which will host meetings during both day and evening. “The envelope of the building is visible from the outside, through the effect of transparency created through large windows that let natural light come into offices, conference room and the VIP lounge”, says Pierre Barillot, architect of Ekinox.

With a capacity of 3,500 seats for basketball, 2,600 seats and 5,000 sitting/standing places for shows, the main hall can, thanks to the modularity of the tribunes and the performance of the technical platform, accommodate performances in 360°. Only one exceptional lighting system could match this modernity and that is how ArenaVision LED became involved. “At the time,” says David Wendling, project manager at Philips, “ArenaVision LED was not yet commercially available, but we decided that this was an opportunity to improve and adapt the product to the specific demands of the JL Bourg basketball club”.

Section through the Ekinox.

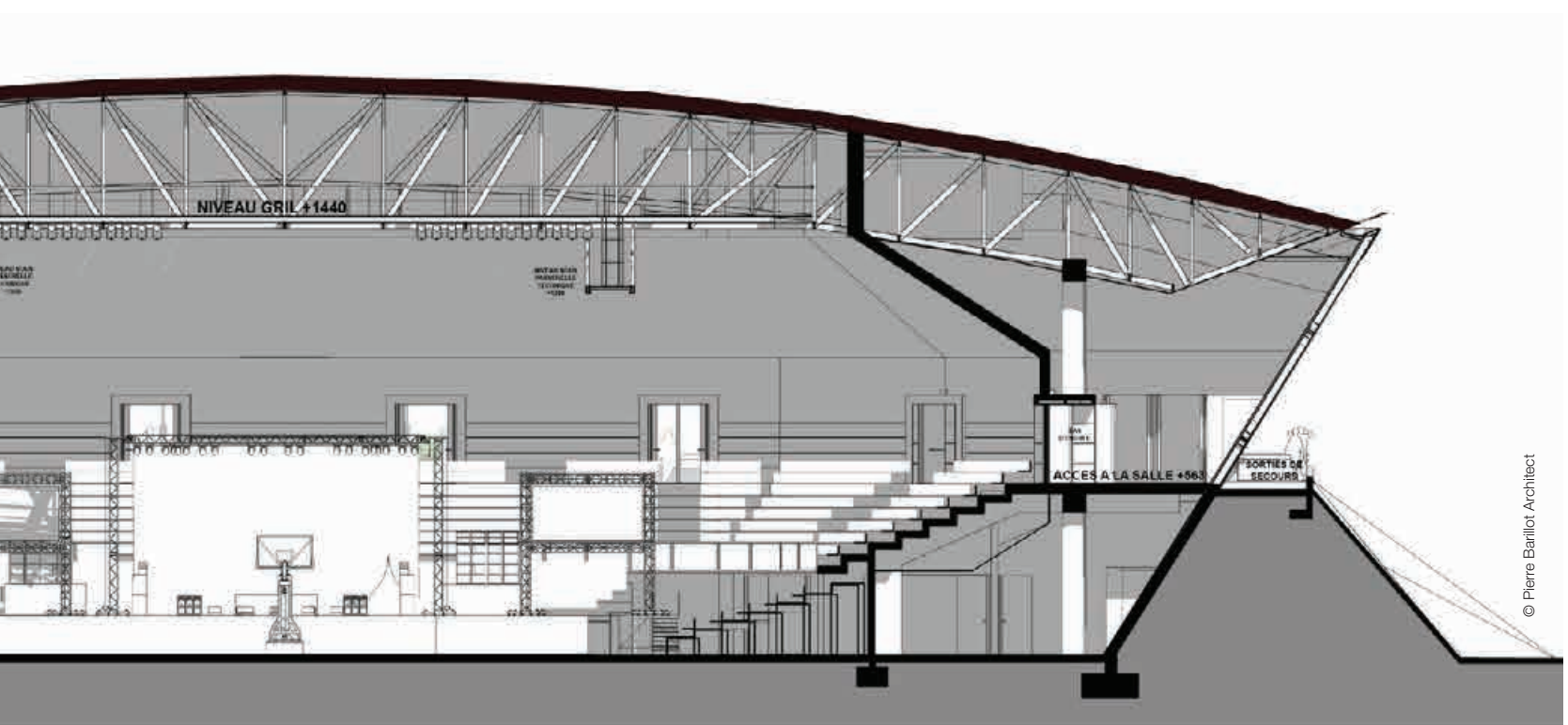


The first requirement was to achieve a lighting level of 1,750 lux, the illuminance required for TV broadcasts. The color temperature had to be at least 5500K and the color rendering index 90.

"ArenaVision LED fulfilled all those parameters in tests," says Mathieu Sergent, a sports lighting engineer with Philips, "but we worked throughout the project with the factory in Miribel, where ArenaVision LED was developed, to make sure that we would get the same results once the floodlights were in place".

Recently, Philips and a broadcasting team carried out a series of tests in slow motion to check the efficacy of the system: ArenaVision LED proved to be a great success, surpassing expectations.

We even managed to do stroboscopic effects with the floodlights!



We just had to learn how to use the keyboards!

A technical achievement both for basketball games and for show lighting

The floodlights have to light not only the playing area but also the “stage” area and the public space. “Plus,” says Fabrice Pacquelet, director of the JL Bourg club, “we wanted to be able to switch the lights off and on completely during the shows before a basketball game, which was not possible with the metal halide lamps”. In total, 50 floodlights of 1.43 kW were installed, each one providing 86,000 lm, with an average life of 40,000 hours.

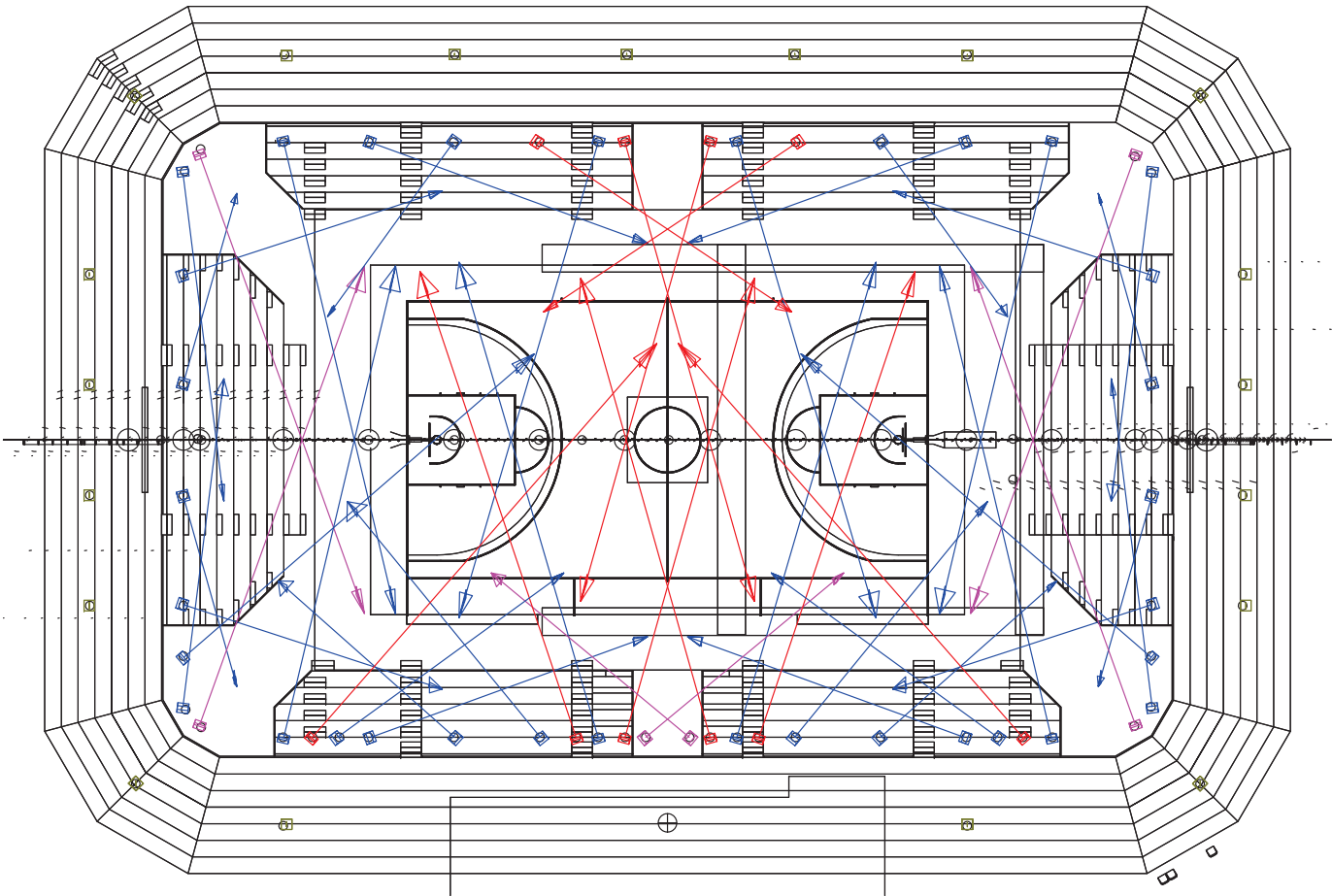
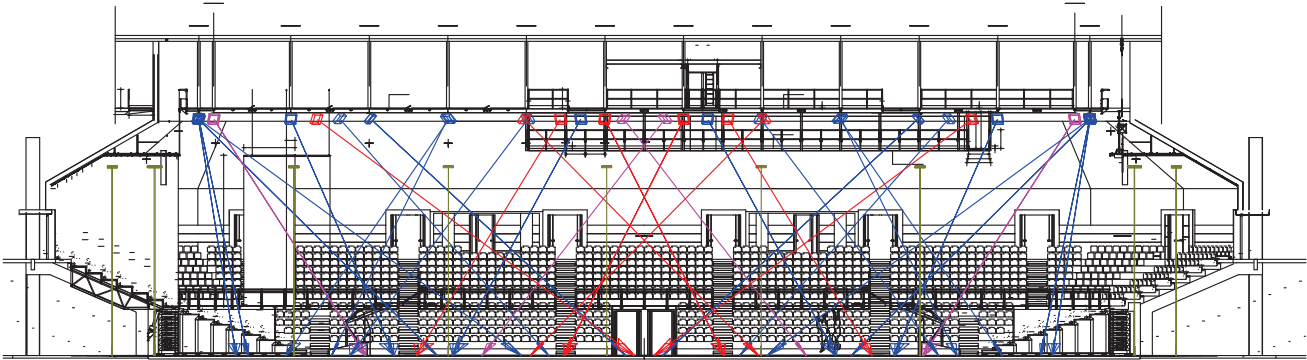
The solution includes a dedicated user interface and a DMX control system that allows fast, easy and reliable commissioning, monitoring and switching between optimal lighting configurations. It was a big challenge for the installer, Ineo, because the ArenaVision LED control system is also used to create special entertainment lighting effects. “The first step was to define the electrical distribution and the connections to the luminaires,” explains Valéry Bernard, who was in charge of electricity installation. “Then, with the new technical grid, from which the elements of decor, sound and lighting are suspended, placed on the floor, we installed the 50 floodlights, which took us about two weeks. Then we lifted the grid up 14 m to its final position and made the last electrical and DMX system connections. It was a success right away.”



Top: The building is heavily used for a wide range of applications.

Above: Lighting for basketball and other sports has to be bright enough for the TV cameras.

- Lighting section and lighting plan**
- ArenaVision LED S6
 - ArenaVision LED S7
 - ArenaVision LED S8
 - ClearFlood ECO



For Yann Hereng, technical operator, it was quite a surprise when he discovered the scope of the lighting effects program, designed by Yves Caizergues, for the shows that take place before, during and after the sports event. "I am used to new technology since I mostly work for shows, but I was really stunned when I discovered the possibilities provided by Arena-Vision LED. We even managed to do stroboscopic effects with the floodlights! We've had five games so far, and no problems at all, whatsoever... we just had to learn how to use the keyboards!"

Fabrice Pacquelet has no doubts at all; the lighting is a complete success: "It seems I am not the only one to be happy with the new lighting. JL Bourg has won every game it has played since Ekinox opened and the arena has been full every time, which proves that the public is just as thrilled as we are".



It is easy to program the lighting to achieve a large range of effects.

Client

Communauté d'agglomération de Bourg en Bresse

Site management

SOGEPA

Basketball team director

Fabrice Pacquelet, JL Bourg

Architect

Pierre Barillot

Constructor

SRC Floriot

Match lighting design

Yves Caizergues

Sport lighting solutions

Mathieu Sergent, Philips Lighting

Installer

Valery Bernard, INEO

Luminaire

Philips ArenaVision LED,
ClearFlood ECO

Websites

www.bourgenbresse-agglomeration.fr
www.ainterexpo.fr/lekinox
www.jlbουργ-basket.com
www.architectures-barillot.com
www.yvescaizergueslightingdesign.com



HOUSE OF FRASER, LONDON, UK

Time to change

House of Fraser has long been a familiar name on the UK high street. Now, with the transformation of its flagship London department store, it's fast becoming the talk of the retail market. What's happening behind the fitting room curtain?

With 61 stores of varying ages and architectural design, House of Fraser faces a significant challenge in establishing a consistent 'look and feel' that reinforces the brand identity, underpins an enhanced customer experience and differentiates it from competitors. Lighting plays a key role in achieving this and House of Fraser has teamed up with Philips Lighting to explore a number of options at its flagship store in Oxford Street, London.

Research has shown that around 60% of purchasing decisions for clothing are made in the fitting room, so Philips has introduced a pioneering approach to the lighting in both the lingerie and general fitting rooms at the Oxford Street store.

The existing lighting in the lingerie fitting rooms comprised a T5 fluorescent mirror light strip, supplemented by a recessed metal halide downlight and a decorative wall sconce. The result was an unwelcoming space with uncomfortable glare that also highlighted shadows on the customers' bodies.

The new solution uses Philips AmbiScene Occasions mirrors, providing tuneable white light that can be adjusted by scene-setting controls, enabling the customers to easily select day, evening, by the pool and natural (daylight) lighting scenes.

In addition, the recessed metal halide downlights have been replaced with suspended square LED feature luminaires to provide indirect ceiling (cove) lighting. The wall lights have been re-located and fitted with MASTER LED lamps.

People can see what the product is going to look like in different environments

A similar solution has been applied to selected general fitting rooms, again using Occasions mirrors with selectable lighting scenes to enable customers to evaluate their selections under different lighting conditions. Existing CDM downlights have been removed, some being replaced by StyliD compact LED fittings.

“Customer footfall on the high street is increasingly becoming a challenge so we need to maximise every opportunity we can within the store,” noted store manager Tim Hyde. “Service is a massive part of that and the Philips lighting range, which enables us to tailor the lighting in the fitting rooms, improves that service so we have a better chance of converting customer interest into a sale.”

Qualitative market research carried out with users of the fitting rooms showed that 68% felt the lighting was better and 54% of the shoppers who used the scene control said they were more likely to buy after using the upgraded fitting rooms. 80% said they were likely to recommend the new fitting rooms to friends and colleagues.

The personal shopper experience is an important part of the House of Fraser service and one of the personal shopper suites has no natural daylight, making the space feel claustrophobic and uncomfortable. Consequently, considerable attention has also been given to improving the lighting in this area.

Within the consulting area the ambient lighting has been enhanced to provide higher light levels and improved colour rendering, using recessed StyliD LED spotlights to help shoppers fully appreciate the colours and textures of materials and fabrics. An Occasions mirror with three lighting scenes has also been installed in the consulting area.

The ambient lighting is further enhanced by two Philips Luminous Textile panels, which integrate multi-coloured LEDs within textile panels to provide a unique ambient lighting system.

“The Luminous Textiles create a scene-changing environment where customers do not feel enclosed,” Phil Looker, head of design for store development at House of Fraser, enthused. “Combined with the scene-changing mirrors that add further options, people can see what the product is going to look like in different environments.”

The scene selection concept is taken a step further in the personal shopper fitting room, where a Philips AmbiScene Seasons mirror uses integrated frontal lighting and optional ambient coloured lighting to provide eight lighting scene options.

The consulting area has also been fitted with a Philips Ambilight 32 inch television, set against a lighter coloured wall to allow for full reflectance. A Philips music media system allows customisation of audio sound tracks.

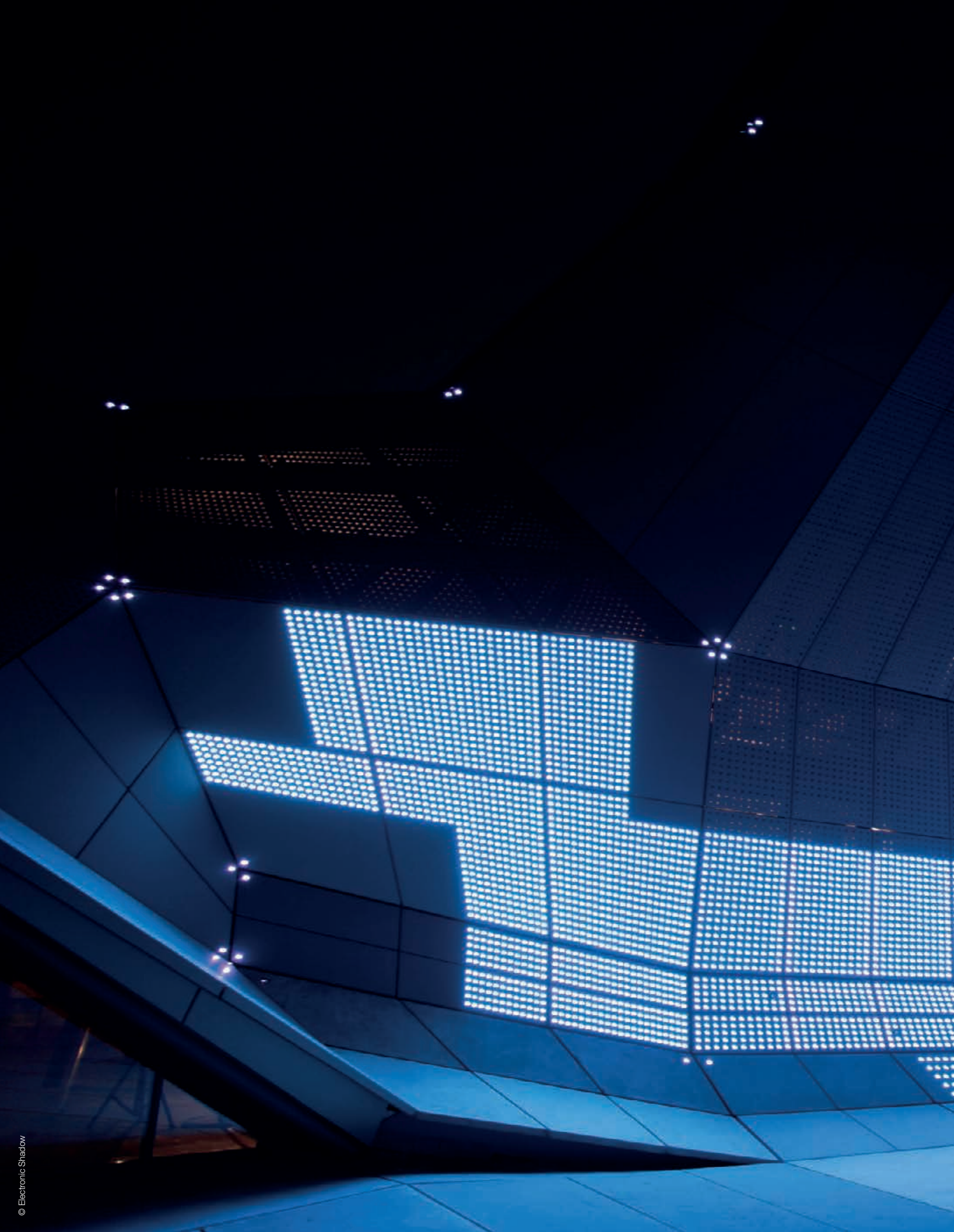
Another area that has come under scrutiny is the Biba concession. The Philips 100% LED solution uses a track and spot concept to increase the flexibility of perimeter lighting, combined with peaks and troughs in lighting levels to create contrast and drama.

David Blakeney, director of store development with House of Fraser, commented: “This is the first time I’ve ever seen a light that does what it says it’s going to do. It has brought out the merchandise to such an extent that these now look like totally different products.”



Top left: Customers can see themselves in a customisable manner of their choosing.
Above: The Occasions mirrors offer a choice of lighting scenes.

Bottom: The lights are attached to specially designed slender black “racks” suspended from the ceilings.



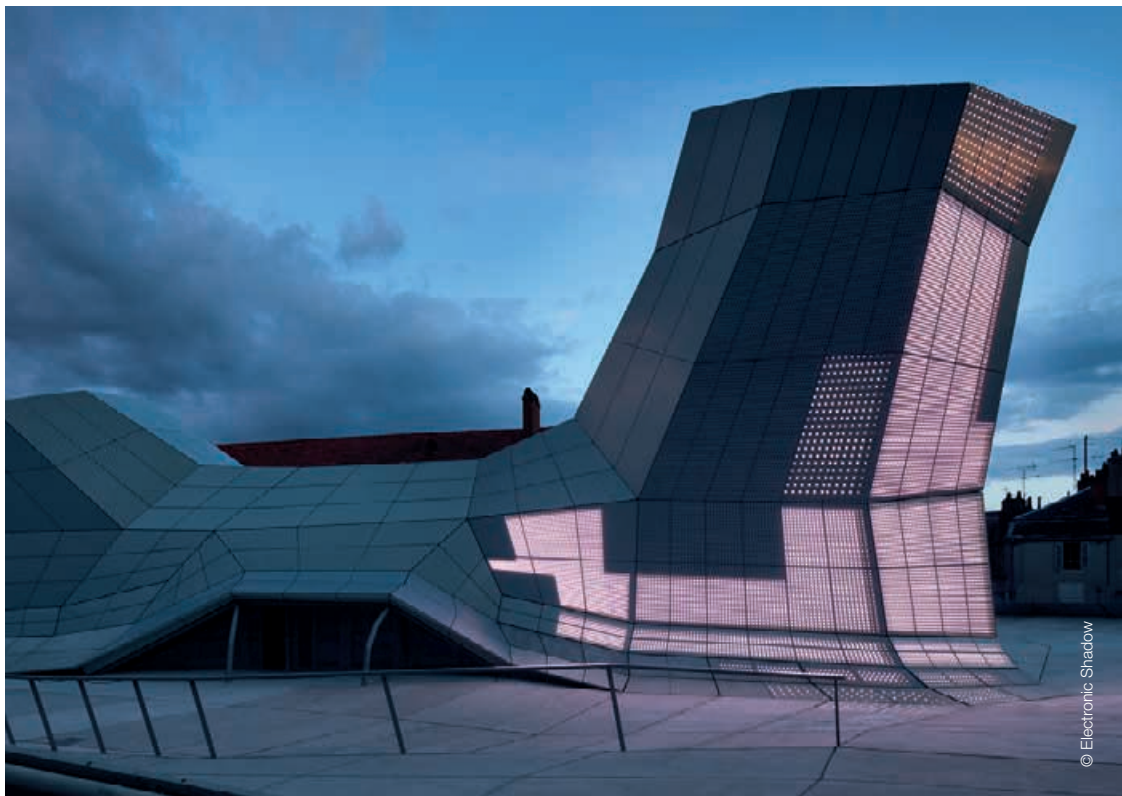
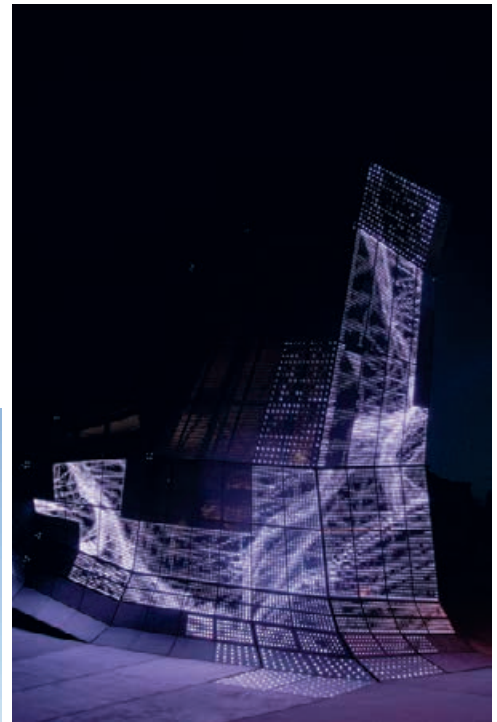


FRAC CENTRE, ORLEANS, FRANCE

Turbulences

By Isabelle Arnaud

The extension of the Fonds Régional d'Art Contemporain (FRAC) for the city of Orléans, designed by the architect Jakob + MacFarlane in collaboration with the artists of Electronic Shadow fully resonates with the avant-garde and experimental spirit of the FRAC.



Lighting Rembrandt's 'Night Watch' with LED was the decisive lighting trial that resulted in the decision to use LED throughout the museum.

An emerging dynamic form is based on parametric deforming and the extrusion of the grids of existing buildings

With a dynamic and stunning architecture, enveloped in a skin of light continuously interacting with its urban environment, Turbulences has become a new art and cultural centre for young creators. FRAC Centre, located in a former military facility in Orléans, needed renovation in order to develop new facilities, which the FRAC Centre's old premises could not offer. The competition for this project, held by the Région Centre, acting as client, with the participation of Europe (FEDER), the city of Orléans and the French government, required the rehabilitation of 3300m² of the existing building into a museum. Architect Jakob + MacFarlane has opted for a strong physical presence with the introduction of an urban signal. The new facility includes a permanent collection, temporary exhibitions, a public reception area, a documentation centre, an educational workshop and other facilities. The presence of the Electronic Shadow artists within the design team, as requested

by the contracting authority, gave a new dimension to the building, making it possible to associate artists with the design phases of the architectural project.

Fluid, hybrid structure

The name "Turbulences" comes from the prefabricated tubular structure of the building, covered by an anodised aluminium casing in which the artists of Electronic Shadow, Naziha Mestaoui and Yacine Ait Kaci, created an interactive veil of light.

Jakob + MacFarlane has brought to the fore an emerging dynamic form based on parametric deformation and the extrusion of the grids of the existing buildings. As a strong architectural signal interacting with its context, this fluid, hybrid structure develops in the form of three glass and metal objects in the inner courtyard. The tubular metal structure, reinforced by a secondary one supporting the exterior

covering panels (aluminium panels, either solid or perforated) and the interior panels (made of wood), is formed by unusual and unique elements. The lower parts of the Turbulences are clad with prefabricated concrete panels, which provide the continuity of the building with the courtyard. The apparent disjunction between the two architectural orders is offset by the impression of emergence given by the Turbulences.

Artists and architects began their discussion early in the project but Jakob + MacFarlane had already sketched out this process of deformation of the architectural frameworks of the historic buildings. As Electronic Shadow explained: "We did not want to create an artistic arrangement divorced from the building but rather one that would underscore and extend the work of architecture", and the artists did exactly that, working on images in volume using light to create resonances with the building.

Left: The interactive skin resonates with the environment, either interpreting climatic and other data or using pre-set scenes.

Below: Turbulences is an addition to the former military facility that houses FRAC.



The flexible form of the strings accommodates two- and three-dimensional configurations.

An interactive skin of light

The proposal consists in covering a part of the Turbulences, giving onto the boulevard, with several hundred diodes, thus introducing a “media façade”, a dynamic interface between the building and the urban space. Using the construction lines of the building, the points of light become denser, passing from point to line, line to surface, surface to volume, and volume to image. This interactive skin of light, integrated in the building like a lattice-work mashrabiya, functions in real time and develops a state of resonance with its environment, using information coming, for example, from climatic data (daylight, wind, etc.) as well as animated image scenarios devised by the artists.

The light, prefabricated structure of the Turbulences has been entirely designed using digital tools. All the building trades involved used the same modelling file. The structures were subject to a trial assembly in the factory where the tubes were welded, before permanent onsite assembly.

Electronic Shadow used Philips ColorKinetics LED strings (Flex LMX) and a video system manager (VSM) necessary to “map” the installation. Each iColor Flex LMX strand consists of 50 individually addressable LED nodes, featuring dynamic integration of power, communication, and control. The flexible form of the strings accommodates two- and three-dimensional configurations. “The whole operation has been the result of full cooperation between all the parties”, says Alain Wisniewski (Philips/VAR), starting from Jakob+MacFarlane’s idea to make the building “alive”, the art work by Naziha Mestaoui et Yacine Ait Kaci, Philips with the LED and VSM technology and the installer Spie.

Flows of information cover the building’s surface, transcribing them as light-images. These luminous signs, the result of a computer programme, implement the merger of image and matter, turning the Turbulences into “immaterial architecture”.

Client

Région Centre

Architect

Jakob + MacFarlane

Lighting design

Naziha Mestaoui, Yacine Ait Kaci, Electronic Shadow

Installer

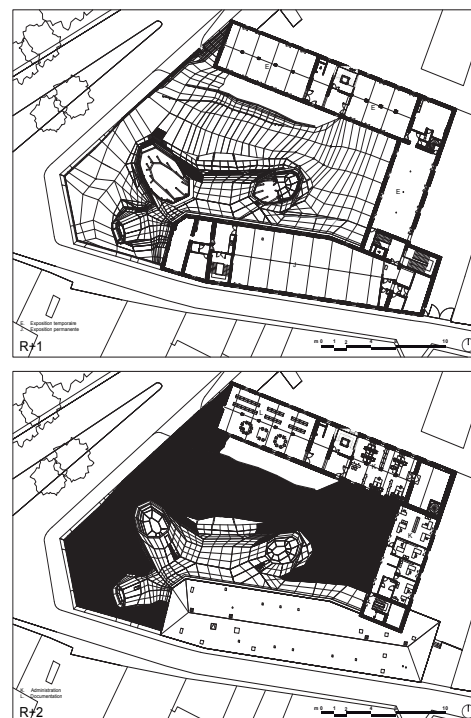
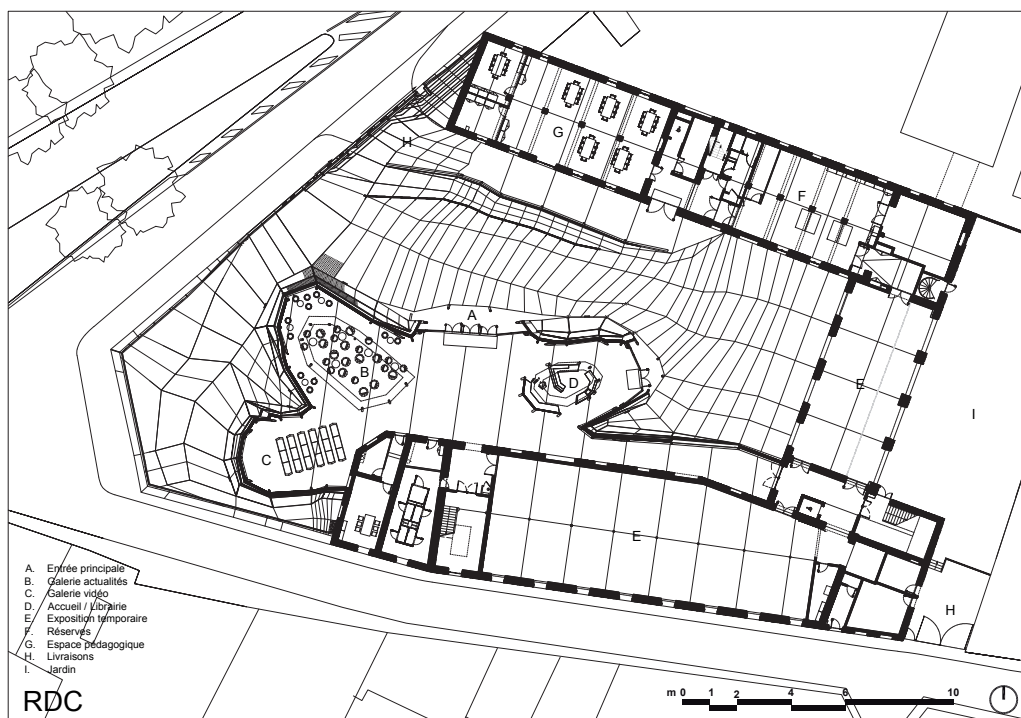
Spie

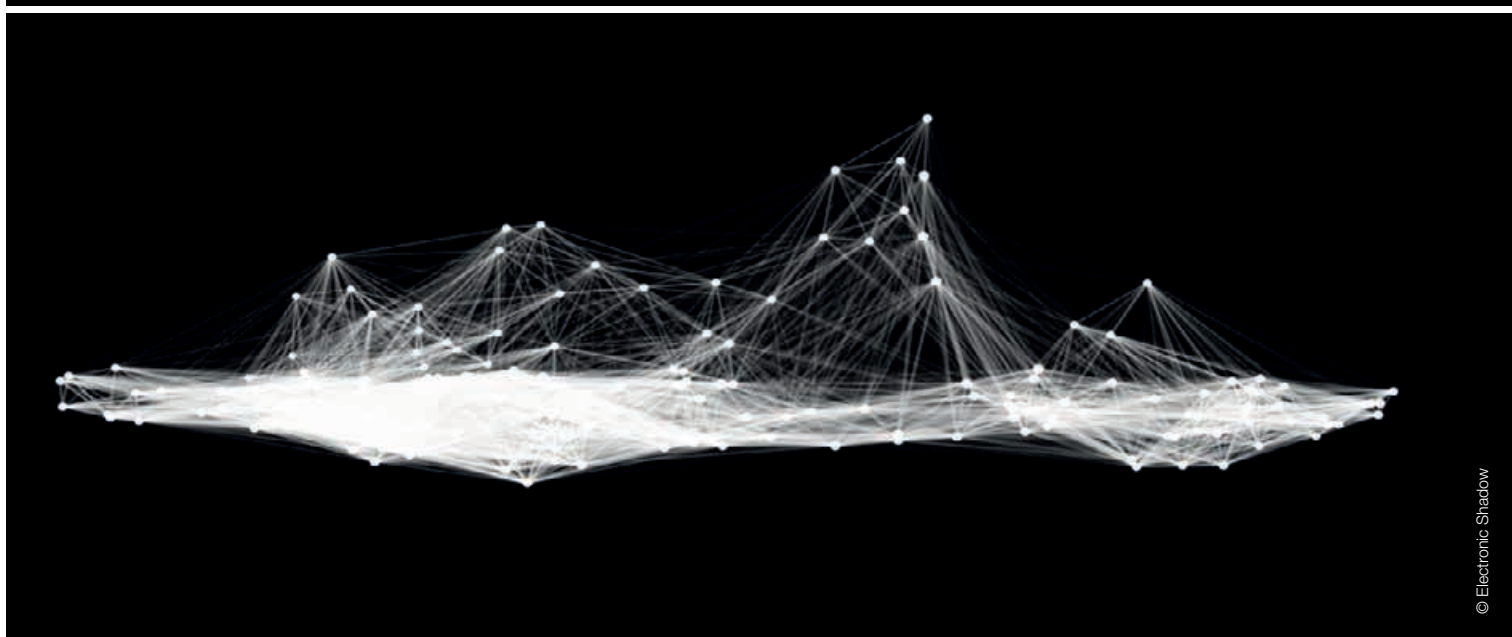
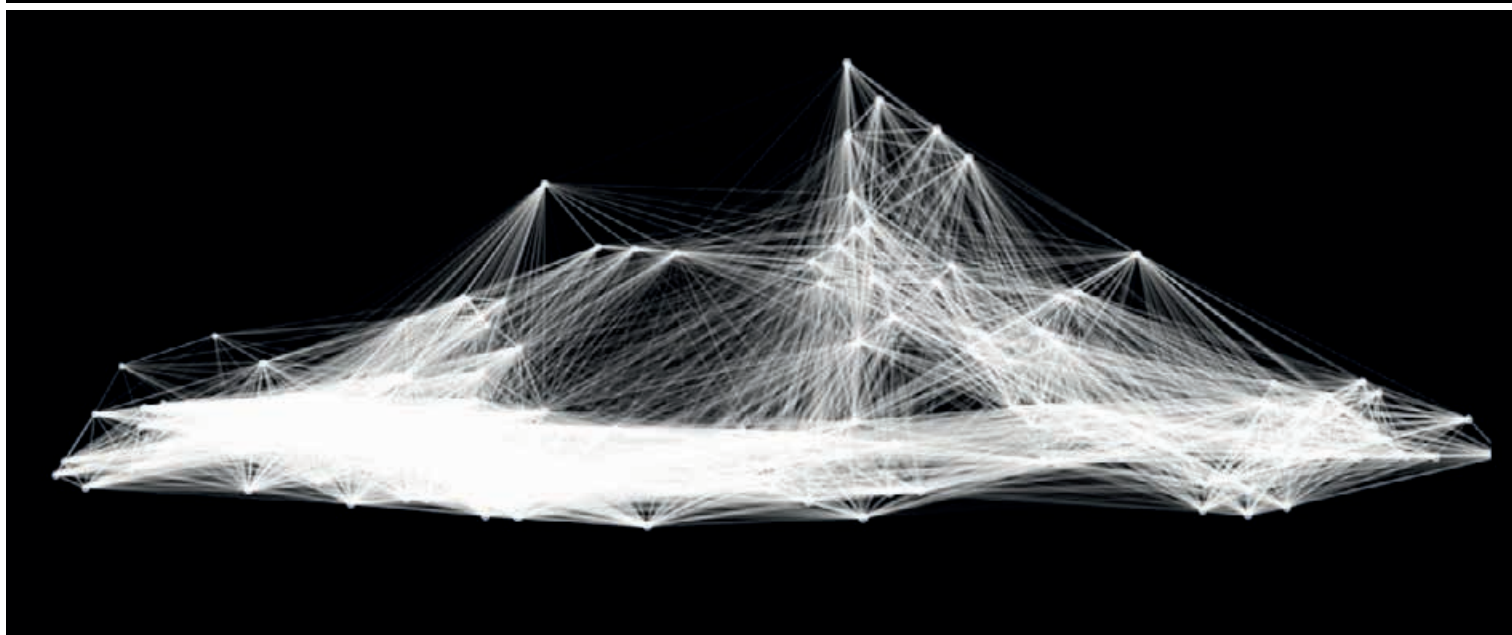
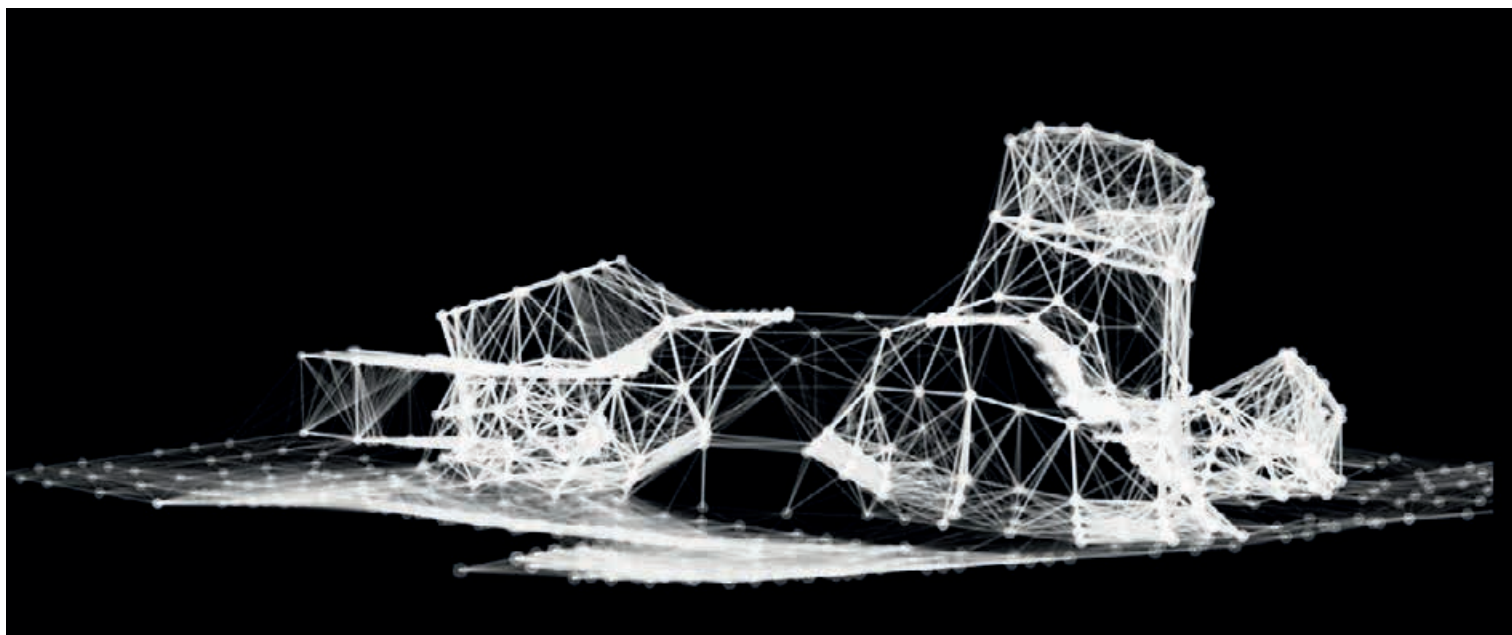
Luminaires

Philips iColor Flex LMX

Website

www.regioncentre.fr
www.jakobmacfarlane.com
www.electronicshadow.com



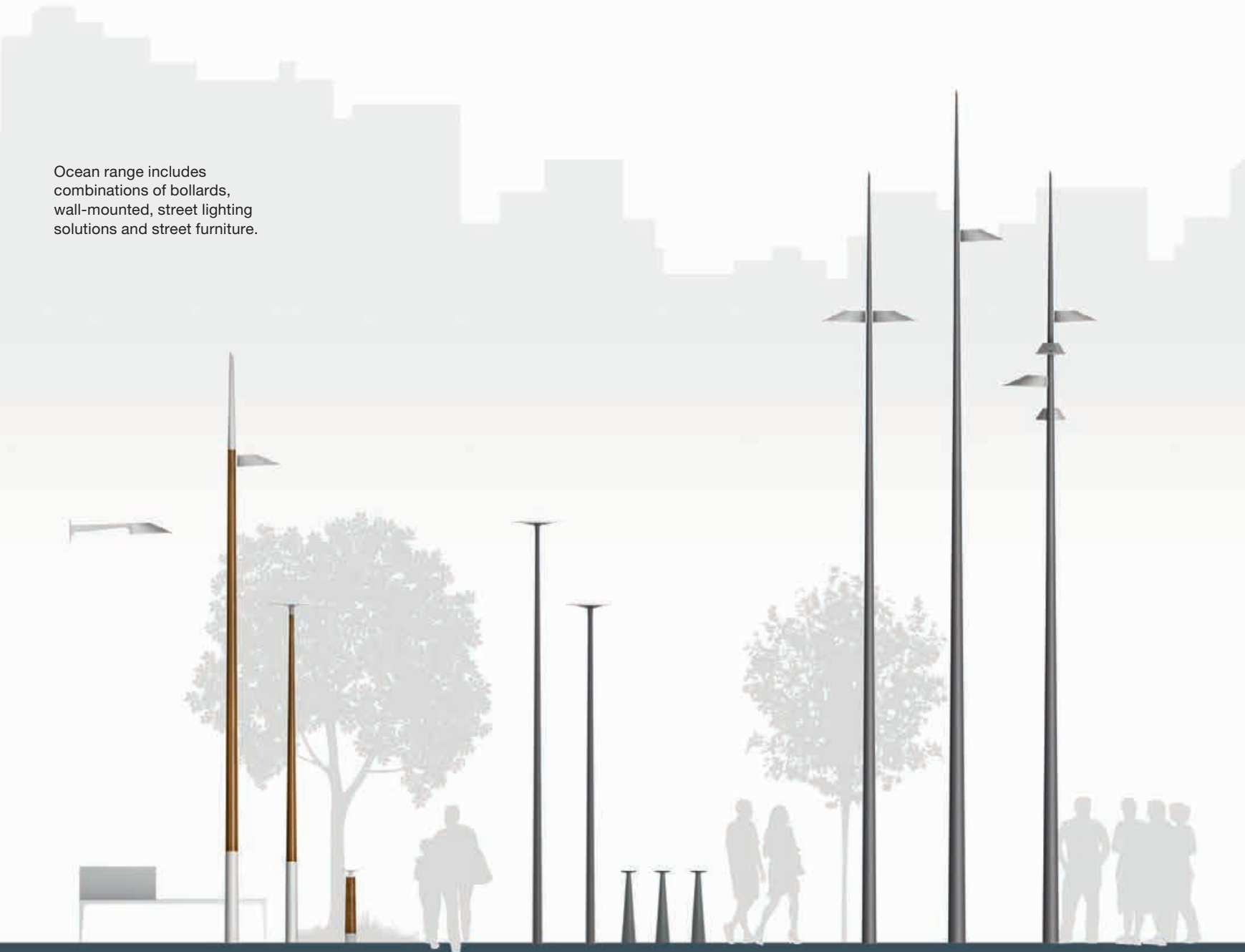


Left: Plans show the relationship between Turbulences and other buildings in the courtyard.
Above: The parametric design process.

Resolving **urban space**

By Jaap van der Linden

Ocean range includes combinations of bollards, wall-mounted, street lighting solutions and street furniture.



Public areas sometimes become cluttered over time with all kinds of different elements. Some of these elements do not look very nice, they do not fit together and they certainly do not strengthen the overall identity of the space. The UrbanStyling range from Philips provides a practical toolbox for professionals in urban development and design to address these problems.

Over time many different types of street furniture are placed in different areas of the city. Although at the time all the objects may have seemed to look nice, now most of them are outdated and the different elements do not always fit together. This makes streets appear restless and cluttered.

When the decision is taken to restructure urban areas, the selection of lighting and other furniture products from different suppliers can be a challenging task for urban planners and landscape architects. The challenge lies in how these designs fit together in the urban context, both at night and during the day. It requires discussions by architects about individual products with a number of suppliers. Families of different products, that convey identity and style in a consistent manner and have been designed for a diversity of uses and lighting scenarios, may be the answer.

This approach enables professionals in urban design to create unobtrusive and generic lighting solutions that blend in with the rest of the street furniture and architecture.

UrbanStyling solutions have been designed for a diversity of uses and lighting scenarios, while giving cities a consistent identity. The range includes combinations of bollards, structures, wall-mounted and street lighting solutions and street furniture. Poles of different heights and various brackets connect harmoniously to luminaires, offering a wealth of compositions, varying from classical to contemporary or modern designs. With this toolbox you can select the styles you believe best fit the context of your project.

These modular solutions act as a practical “toolbox” for urban planners, landscape architects and other specifiers. They allow designers to play with the quality, effects, rhythm, texture, distribution and color of light to facilitate the creation of fully personalized “light environments” that contribute to more attractive urban places to enjoy and live in.

Website

Urban inspiration for complete sets document:
www.philips.com/urbancompletesets





From right to left, Glenn Campion, Steven Dean & Oliver Ling examine the ProAir luminaire.

Retail

made easy

By Ruth Slavid

Steve Dean of LAPD, a lighting and product designer in the UK, is skilled at giving retail customers the designs that they need and understanding the pressures on them. The new ProAir luminaire, designed by LAPD, should allow them greater flexibility in displaying their wares, whilst providing the highest quality of light.

How did you become a lighting designer?

Steve Dean: I studied product design at Central St Martin's Design College in London, and then I went to work at Concord Lighting for 18 years, where I ultimately ended up running the lighting design and specials design department from the High Holborn showroom.

Were you always interested in lighting design?

I became interested whilst at Concord. I liked the idea of changing spaces, collaborating with interior designers, architects and end users. Lighting naturally plays a huge role in every environment with which we interface: theatres, retail stores, restaurants or even coffee bars.

The success and feel-good factor is largely dictated by design and finishes which, of course, is why lighting remains fundamental, not to mention being a fun tool to play and influence with.

How do you think about lighting design for clients?

You always need to fully understand the needs of the client, and the space. Whoever you talk to about light, you will find they have been in their business for a long time. You need to take time to understand their journey and ambitions, and consider the best ways of getting them there. Never discard the past and their estate; we often find that small steps, in the right direction are all that are needed to refresh and provide a new look that

exceeds expectations. We create a palette of effects, using the various lamp types and luminaire designs at our disposal, to ensure our concepts work by applying subtle layers of light to showcase the space and environment in its entirety.

What do you think are the main factors to consider in retail lighting?

It does not matter if you are designing for a major supermarket, or for a boutique that wants something magical. We strive to create designs that are future-proofed and adaptable, not just in terms of the ceiling layout but also commissioning; the stores need the ability to re-engage the customer at every opportunity.



How do you use lighting to attract customers to stores?

You have to create the environment that the particular retailer wants, one that suits the requirements of their customer base. They will want an environment that is exciting and interesting; in some cases that may mean varying the contrast and intensity of light, or creating attraction just by changing the colour temperature of the lighting applied to consistent surfaces. The key, in my opinion, is the adoption of proven technologies that are simple and easy to implement and maintain. For example, we might use presence detection, so that as a customer approaches a mannequin, it becomes brighter; the ingredients of effects and technology need to combine so that the whole space works holistically. Subtlety and impact are key drivers; the fun is finding the best way to balance the scales.

What does comfort mean to you in terms of the retail environment?

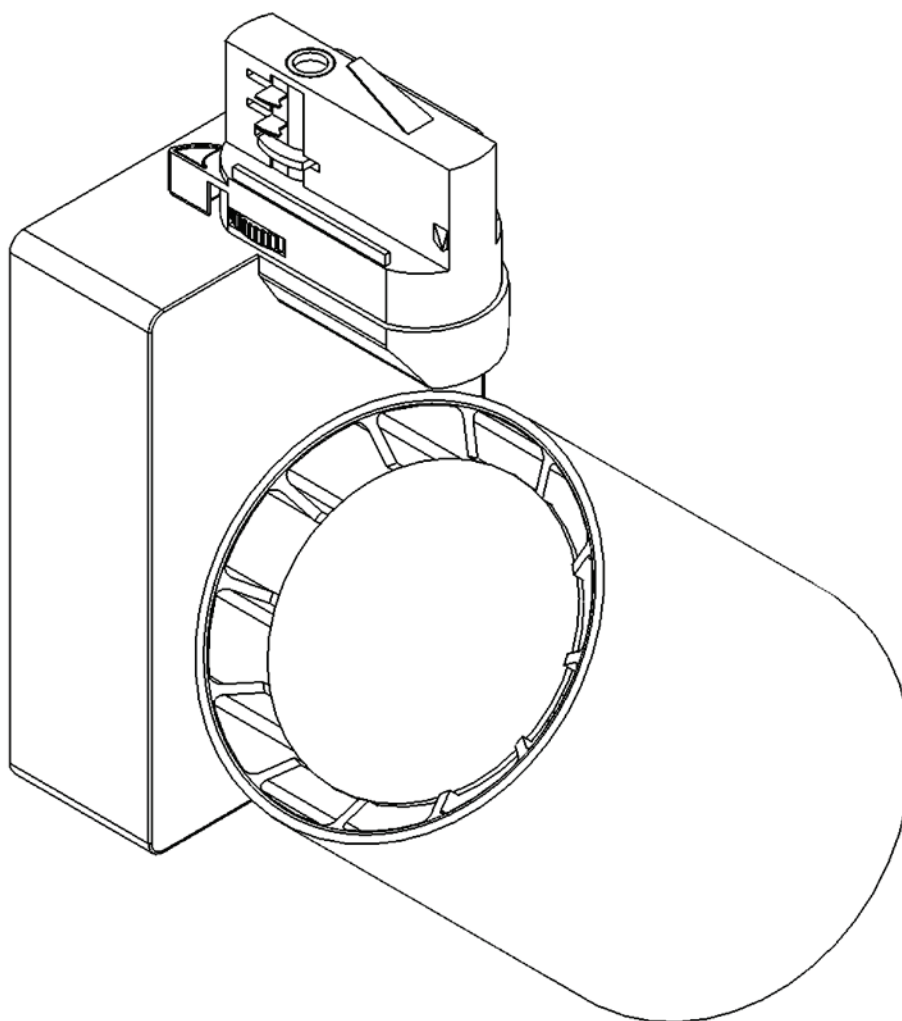
It is about the “delight to shop feel”; you want to be in a store, feeling relaxed. For example, whatever the type of fixtures used to light the space, they should not cause glare; this can become distracting and uncomfortable for shoppers and, critically, the staff.

There will often be zones within a store in which you will want to linger and pause, whereas others, such as the area around the till area, are likely to be faster moving; the lighting needs to respond to that. We strive to create pace, enhance the mood and bring about the all-important ‘feel good factor’; these, when combined well, create what I term ‘comfort’.

How did you take these approaches into account when designing the ProAir?

We wanted to give designers and retailers a clean design with the very latest technology.

We were aware that LED technology has been slow to be adopted, and accepted, by fashion retailers, because the colour rendition, cost and efficiency were not good enough in the past. Philips, using its latest advances in chip and driver technology, has developed LEDs with a CRI (colour rendition index) greater than 90, leading efficacies and useable outputs, tailored into a cost-effective and simple form. A fashion retailer would want to consider these merits; LEDs in retail, as they are elsewhere, are forming a new



Design of the ProAir is clean, classic and simple - and easy to adjust and adapt.

era in how we illuminate spaces. We have used the best design and materials to keep the LED chip cool; this is a professional lighting tool, designed using LEDs from conception. We wanted all the beam options available, using the best-in-class LED.

The gear pod on the side is designed so that the most up-to-date gear technology can be accommodated, from the very simplest, which will only occupy about a third of the space, to the most fully addressable using DALI technology, which will fill the entire pod.

How did you think about the physical form of the ProAir luminaire?

We wanted a discreet, non-emotional design. We do not want anybody to like or dislike the physical form of the design. If you create emotion, some people will love it but some people will hate it. We designed a luminaire with a barrel that is 100mm in diameter, with a rectangular gearbox to the side and a unique knuckle between the two. It is very clean, classic and simple.

How does ProAir respond to the requirements of modern retailers?

If retailers fail to maintain the look of their store, then they will simply miss out on sales and, in the current climate, this is not an option. A store which adopts accent

lighting that misses the target does not evoke any confidence; these spaces need to exude the confidence of the retailer, which goes back to the feel good factor.

We know many visual merchandisers (VMs) and often their workloads, along with health and safety constraints, do not always allow them the freedom to readily adjust the position of the spotlights as they change the merchandise positioning below. Understandably some visual merchandisers dislike touching light fittings due to heat, the heights being worked at, or the fear of getting an electric shock. Education is fundamental, and we often work with the VMs and deliver simple manuals to aid their understanding. With ProAir, ladders are no longer a requirement. The unique commissioning knuckle will enable the



VMs to adjust the fittings as they work, even whilst trading. As part of ProAir we have designed a commissioning pole that fits in the knuckle between the barrel and the gear housing, allowing the VMs to adjust the lighting quickly, and with the added safety of remaining at ground level.

As a lighting consultant, will you be recommending ProAir to all your clients?

We have to give our clients a choice of all the best-performing products for their projects, at a price that they are willing to pay. We always try to specify the best all-round product, one that suits the needs of the customer. Some, for example, like luminaires with a traditional 'barn door' look, or that follow a unique styling. We are here to recommend, but we would

never try to dictate what a customer uses. We always offer a menu; our clients' taste and budgets determine the right decision.

Website

www.lapd.co.uk



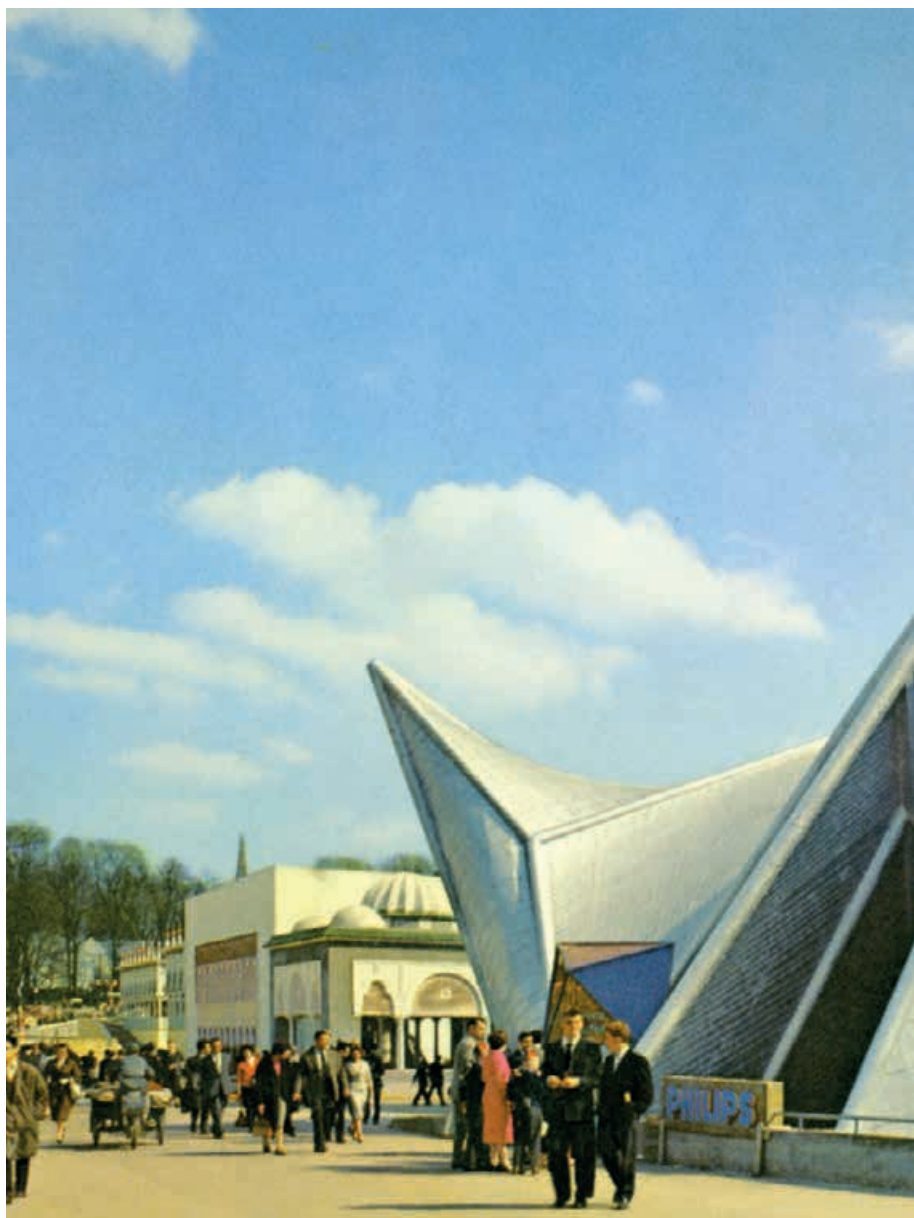


Going forward
together

The background is an abstract composition of various shades of blue. On the left, there are several parallel, slightly curved lines that create a sense of depth and movement. The right side features a series of vertical lines that also curve slightly, giving the impression of architectural elements like columns or a modern staircase. The overall effect is a dynamic, layered geometric pattern.

By Ruth Slavid

Light and architecture have always been intimately linked, with architects using light as a tool not only to display their buildings but also to sculpt their spaces. This dates back as far as the design of the Pantheon in Rome, where the light that streams through the oculus highlights a different point in the building at different times of day.



That however was, of necessity, an impressive use of natural light. Architects had little opportunity to work creatively with artificial light until the introduction of electric lighting in the 19th Century. And although it used the same power source as today, the technology was unrecognisable. Architects have both been involved in demanding better technology and have pioneered new ways of using it.

For more than 50 years, Philips has worked with architects to understand their needs and to give them what they wanted – sometimes even before they knew that they wanted it! At the same time, it has collaborated with architects to discover new and imaginative ways of using light.

The first significant collaboration was on the Philips Pavilion at the Brussels Expo in 1958. Designed by Le Corbusier, arguably the most significant figure in 20th Century architecture, with architect and composer Iannis Xenakis and composer Edgar Varèse, it was also known as *Le Poème Electronique*. The sculptural concrete pavilion, looking rather like a tent, offered an eight-minute multimedia experience of light, sound and images – an idea that is commonplace today but was revolutionary at the time.

As the technology advanced, so the collaborations could become more sophisticated. But in order to understand what is needed, it is essential to have knowledge of changing markets and requirements. For this reason, in 1996 Philips embarked on a major project called 'City, People, Light'. Centring on urban lighting, this had a number of strands and ran for more than a decade.



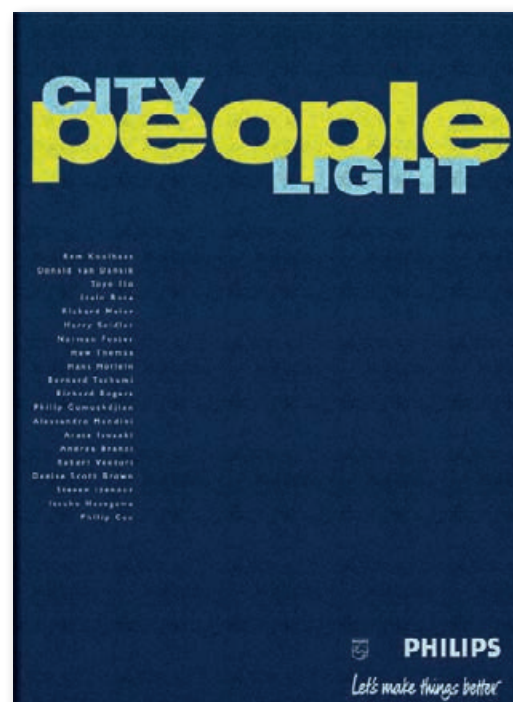
Previous spread: Colon_Scope by Francisco Mangado (Mangado y Asociados) & Antón Amann (ALS Lighting) from Transitions: Light on the Move.

Left: Philips Pavilion at Brussels Expo 1958.

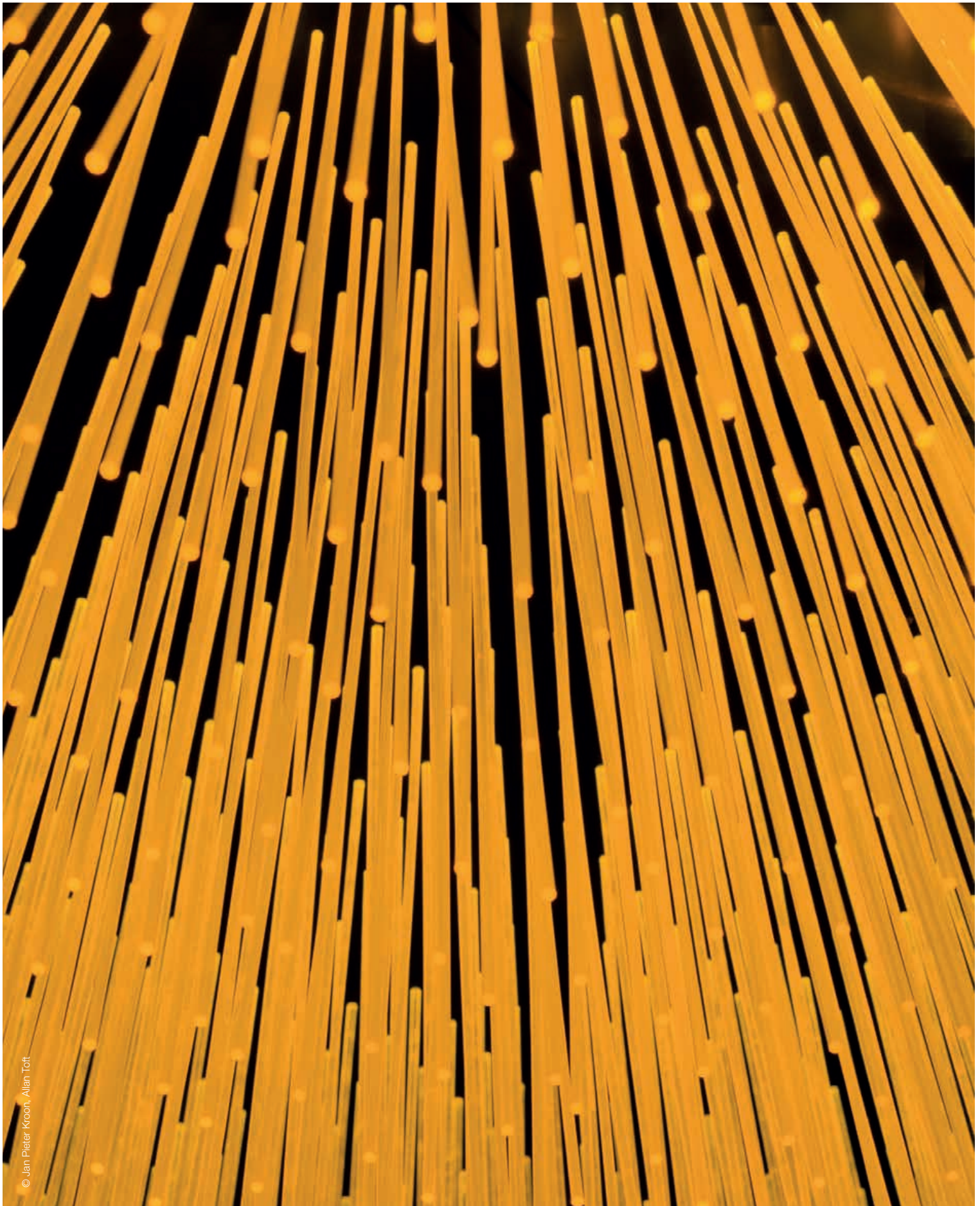
Top far left: Plan of the pavilion.

Bottom far left: The multi-media presentation was revolutionary.

Below: The City People Light book.



It started with a survey of world-leading architects, including for example Norman Foster, Rem Koolhaas and Hans Hollein, to understand their vision for cities. Then there were workshops to develop lighting concepts derived from the research, followed by the publication of a book in 1998. Next came a forum in Paris with 400 professionals sharing and developing the ideas. In 2005 Philips embarked on a research project with the Bartlett school at University College London, regularly voted the UK's best architecture school. This looked at all aspects of outdoor lighting, from energy consumption to well-being to criminality. Again the findings were disseminated widely, first through a series of forums and then in a new edition of the City, People, Light book.



© Jan Pieter Kroon, Allan Toft

Seh + Mehr by Léon Wohlhage Wernik
Architekten, Berlin from the Transitions exhibition.

Since then there has been a steady stream of programmes and projects, of which several are discussed here 'Transitions: Light on the Move' was a means to showcase the possibilities of new technologies, specifically LED, by asking seven teams of leading architects and lighting designers to come up with concepts that exploited the new technologies. Each of these was then built within a shipping container and the containers were transported around Europe to create exhibitions in a number of leading cities. There was also a booklet that documented the undertaking.



Top: The publication that accompanied the Transitions show.

Above left: Weightless by Dorte Mandrup (D. M. Arkitekter ApS.), Copenhagen

Above right: Milefiori al 'Sol by F. D. (Architecture & L'Observatoire), Paris.



By definition, the Transitions project was temporary, but Philips also wanted to create a new permanent opportunity for designers to explore changing technology. It did this through the construction of a new building at its Outdoor Lighting Application Centre. A relatively simple although elegant building designed by the Espace Project, this really comes into its own at night, when its facades can be lit in 70 different ways in a showcase of just what is possible today, largely using the latest in LED technologies.

The building was constructed in 2005, nearly half a century after Le Poème Electronique but a world away from it in terms of the sophistication and potential of the technology. Since then, of course, development has not stopped and neither have collaborations with architects or the dissemination of knowledge. Another new building that will open later this year is an indoor lighting application centre on the high-tech campus, representing a vital link between research and manufacture.

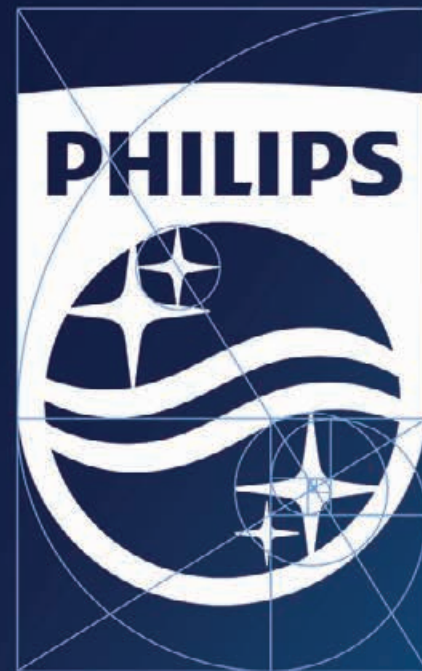
Left and below: The new building at the Outdoor Lighting Application Centre has facades that can be lit in 70 different ways.

Opposite: The new Philips logo was designed using the principles of the golden section.



But the latest development is not a research project, nor an exhibition, but a graphic re-imagining of the Philips shield, the symbol of the company. With its stars representing light and its waves representing electric waves, this sums up the organisation's areas of specialisation. The new design is simpler and more contemporary – a feat achieved in part by incorporating the proportions of the golden section. Seen in nature and in the earliest architecture, the golden section is as relevant to design today as it ever has been. Like the best and most contemporary design, it is timeless – a worthy aspiration for the buildings that will be created with ever advancing light technology.

The Philips Shield and the Golden Ratio



city.people.light award contest 2014 is **your city** a potential **winner?**



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lighting project now to enter the
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innovation ✨ you

Rietberg, Germany
Winner city.people.light award 2013

The award ceremony takes place in Dubrovnik, during the Annual LUCI meeting from 5 to 9 November 2014.



PHILIPS