





Dear Sir or Madam,

In our three-part series “Smart City of Today and Tomorrow”, we use the example of public space to examine the interlinked, efficient and liveable city of the future. In the first issue of the Lightletter, we conducted an interview on the subject of “light” with Prof Peter Andres and Katja Schiebler from the planning office of Peter Andres Beratende Ingenieure für Lichtplanung [Consulting Engineers for Lighting Design] in Hamburg.

In this issue, we are continuing this topic series with a look at “multifunctionality”. We gave Prof Lutz Heuser from [ui!] the urban institute®, a leading software and consulting company for digital Smart City solutions, the opportunity to speak on this topic in an interview.

The U.S. Bank Stadium in Minneapolis, Minnesota, is also outfitted for multifunctionality. As a venue for professional sporting events and an event location for concerts, festivals, shows and major events, the arena attracts millions of visitors. The lighting solution for the outdoor areas is closely intertwined with the experiential character of the building. Multifunctional CITY ELEMENTS illuminating columns from Hess meet a wide range of lighting requirements and are also equipped with additional light, safety and communication functions.

You can now discover for yourself our versatile product and solution concepts for the holistic design of urban spaces in our new “Lighting & Site Furnishings” catalogue. The complete catalogue is available on our website as a digital version to download or also as a printed copy. Let yourself be inspired by our unique lighting and design solutions!

These and other topics await you on the following pages.

We hope you enjoy reading our Lightletter.

With best regards,

Hess GmbH Licht + Form

**Dr Ernst Smolka**  
Managing Director

**Marco Walz**  
Head of Communications and Marketing



# A MAGNIFICENT LIGHT IS NOT JUST ILLUMINATION – IT'S, ABOVE ALL, EXPERIENCE.

Oliver W. Schwarzmann, Economic poet





# THE SMART CITY OF TODAY AND TOMORROW

Edition 2: – Multifunctionality in urban spaces  
– Expert Interview with Prof Dr Lutz Heuser

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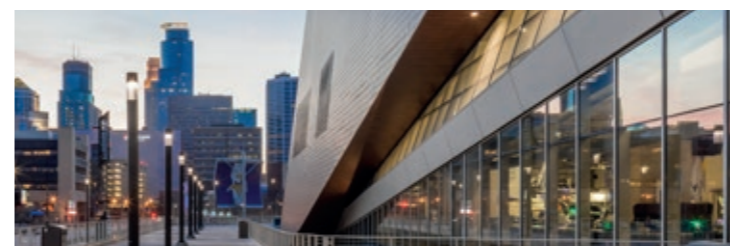
Expert interview with Prof Dr Lutz Heuser ([ui!] the urban institute®)



# Reference Project

- U.S. Bank Stadium, Minneapolis (US)
- Ambassador House, Zurich (CH)
- Church square, Drusenheim (FR)

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U.S. Bank Stadium, Minneapolis (US) | Arena of superlatives



Ambassador House, Zurich (CH)



Church square, Drusenheim (FR)

# Products, News and Events

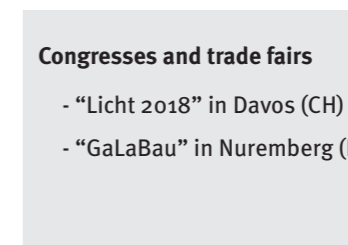
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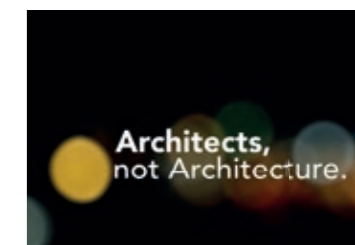
The new OSLO – now even more attractive!



New catalogue: Lighting & site furnishings



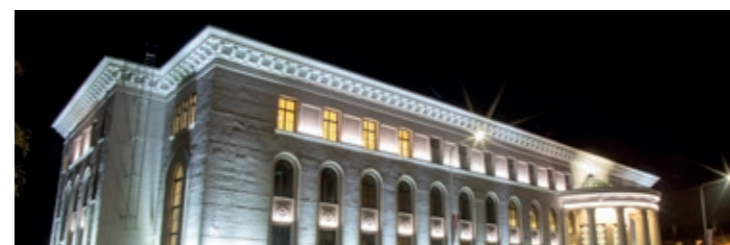
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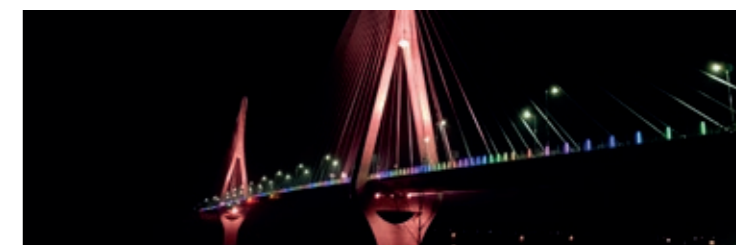
Events: Architects, not Architecture

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VEF Culture Palace, Riga (Latvia) | White is an evergreen



Yeonggwang, South Korea | A bridge linking land and tradition

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PLDC 2018 in Singapore



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Platform SMART CITY SOLUTIONS at trade fair INTERGEO (Frankfurt)



GLOW: Light art festival in Eindhoven (NL)



“Fête des Lumières” in Lyon (FR)









Prof Dr Lutz Heuser:

## Multifunctionality in urban spaces

In conversation with Prof Dr Lutz Heuser about the Smart City concept and the collection and processing of digital information.

**Now more than ever, everyone is talking about the term “Smart City”. As a designated expert, how do you interpret this concept?**

**Prof Heuser:** As it is used and understood today as a technical term, the term Smart City primarily refers to the digitalisation of cities. At the beginning of the Smart City movement about seven or eight years ago, the topic “smart” was also discussed on a broader scale in the sense of smart people and smart citizens. These days, it has become apparent that Smart City refers to the digital transformation of the city, and this meaning is now generally recognised.

Digital transformation covers all areas of a city, from administration and public infrastructure to real estate – everything that makes up a city.

**What drives a city to become a “Smart City”?**

**Prof Heuser:** It’s specific issues that can be better solved using digitalisation. There’s no city that says to itself, “I need to digitalise now.” The reason to do so is always a specific action area that calls for a solution.

The action areas are strongly influenced by the ongoing growth of many cities, as is also the case in Germany in particular. The trend towards urbanisation is still there, and this growth is also placing greater demands on the infrastructure, more than was the case in the past.

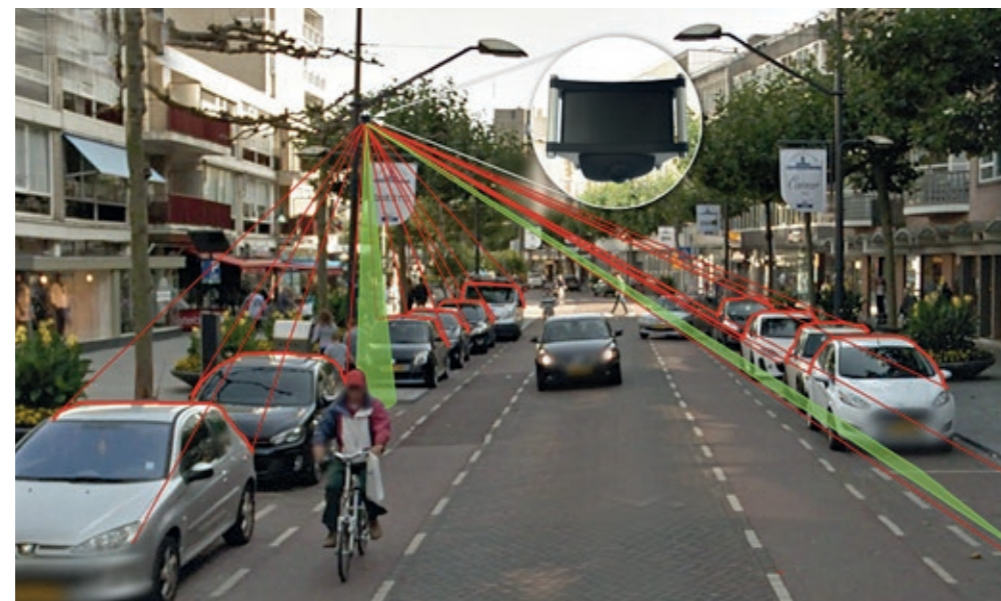
That means more traffic, more photovoltaic systems on roofs, simply more of everything. The existing infrastructure is not designed for this and now has to “play catch up”, so to speak.

In this process, it becomes clear that digitalisation is much more efficient than proceeding in the conventional manner.

Here’s an example: You can’t just add another lane to a road. Consequently, you have to think of other ways to address traffic issues.

Digitalisation, that is, making digital information available, is now playing a key role here. The situation is similar concerning parking. Nowadays, searching for a parking space is based on the principle of hope. I know about where there might be a parking space and hope I’ll find one there. That’s what it is like in the totally analogue world – we don’t actually have any information.

Through digitalisation, we’ll receive information in real time. We won’t just hope; we’ll know.



Parking sensors affixed to streetlights detect vehicles in the surrounding parking spaces and transmit their occupancy in real time to an app or the navigation system of a vehicle.

We’ll make our decisions based on this knowledge. And this decision is an educated decision. The decision has incorporated the knowledge, so to speak, and makes more sense than previous decision-making based on the principle of “I’ll give it a try; it’ll work out somehow”.

**“Through digitalisation, we’ll receive information in real time. We won’t just hope; we’ll know.”**

My theory is that as long as I’m not sure what is going on in the city, I’ll always hope that things will be different just for me.

But if I now have the information that the city is at a standstill – due to a traffic jam, for example – I will make decisions that are better for me and choose appropriate alternatives. The key message here is that we have to get away from the principle of hope.

There’s more though: All of us are already using digitalisation to a great extent in our private lives, namely when we want to have current information immediately. Communication channels such as Twitter ensure that everything happens in the here and now.

Only the city continues to speak in a completely analogue language, and through digital transformation we need to bring cities up to where we have been in our private lives for a long time. It is about transforming the principle of hope into an “educated decision” and making sensible decisions on the basis of knowledge.

**“It is about transforming the principle of hope into an “educated decision” and making sensible decisions on the basis of knowledge.”**

**What are the advantages for cities and their residents and visitors?**

**Prof Heuser:** It is very important that we tackle the big challenges facing cities today together. For example, we need to get a grip on the traffic situation. We cannot continue with the mobility consumption we are used to today.

## [ui!] the urban institute®

Prof Dr Lutz Heuser

The computer scientist and manager with a doctor title was appointed as an honorary professor of the Technical University of Darmstadt in 2004 and at the same time appointed as a guest professor of Queensland University of Technology in Brisbane, Australia. In 2008 he received an honorary doctorate from the Technical University of Dresden.

Lutz Heuser is a member of the German Academy of Engineering Sciences (acatech) and the Feldafingen work group. From 2008 to 2009, he was a member of the Praesidium of VDE (Germany’s Association of Electrical Engineering, Electronics and Information Technology).

Since 2013 he has been a member of the expert group for the European Innovation Partnership “Smart Cities and Communities” (EIP SCC). Since 2014, he has also been part of the expert groups of the national platforms “City of the Future” and “Internet-Based Services for Business”.

Lutz Heuser has been Chief Technology Officer (CTO) and Chief Executive Officer (CEO) of the urban institute group of companies since August 2012.

The urban institute® was founded in 2012 by Prof Dr Lutz Heuser to support cities in their efforts to jointly develop and sensibly implement innovative concepts and solutions for a Smart City.

Its activities focus on cloud-based smart services to efficiently use existing urban real-time data in areas such as open platforms, sustainable mobility and intelligent energy management.

The urban institute group of companies is based in Chemnitz and has four locations in Germany as well as branch offices in Brisbane (Australia), Budapest (Hungary) and New York (USA).

Website: [www.ui.city/en](http://www.ui.city/en)



Prof Dr Lutz Heuser

Cities like Munich predict an increase in commuting times in the morning and evening to theoretically four hours. These are numbers beyond comprehension.

You simply would not be able to get to your workplace on time, or you would be underway, like in Tokyo, for about 16 hours a day. There would no longer be any quality of life. A city like Munich could no longer boast that it offers high quality of life.

The advantages are obvious. We help to address the most important challenges.

These are primarily traffic, including parking, and secondly, combating climate change. This is a key task that must be dealt with.

There is certainly still a lot of work to be done to make the public aware of the issue. Whereas city residents experience traffic literally first hand, the problem of combating climate change is something they do not immediately notice.

Except for our hot summer, if you want to take that as an indicator. There is a lot more explaining and educating to be done in this area.



**Where do you see the focus of future developments?**

**Prof Heuser:** The issue of traffic and parking will greatly affect cities now and for years to come. A lot will happen here, and it will have to happen, not least because the technology is now to the point where it's become possible to implement new solutions.

The second issue will be energy efficiency. It is currently becoming clear that you should look at neighbourhoods as a whole instead of individual houses or buildings. The question to be answered is how do we manage to balance energy demand with energy production and storage so that we have cost-effective solutions?

There is currently a report on how Germany's Ministry of Economic Affairs is considering an acceleration of the high-capacity power-line construction from north to south. That's one way. Another way would be to ask: How can I better optimise local production, local consumption and local storage among each other? When the sun shines, it shines on all roofs, and all photovoltaic systems feed in energy at the same time.

However, the resulting oversupply of energy is currently not kept in the neighbourhood, but goes somewhere else through the distribution networks, and in the evening, other electricity comes back again. If this oversupply were to be stored in the neighbourhood, demand and capacity could be balanced.

If you systematically think this through to the end, you won't need the long overland power line routes anymore, because there will be many local production sites.

Regionally produced electricity has the lowest transport costs and burdens the environment and the economy the least. That's the philosophy behind it.

**You are developing software solutions for cities and municipalities. What kind of solutions are they?**

**Prof Heuser:** We are focusing on how data can be used to provide specific new services. These solutions are essentially what is referred to as a data platform. Data from a city's various IT systems is then uploaded so that it can be used for new Smart City services.



Presently, this data is stored in IT systems that were acquired for a different purpose. Only if this data is made available can these new services be offered.

Access to an IT system is always problematic because there is a risk of misuse. For this reason, many cities are justifiably cautious and in some cases cannot imagine providing

access to their data. That's why this data is extracted from these IT systems in a controlled manner and made available on a data platform.

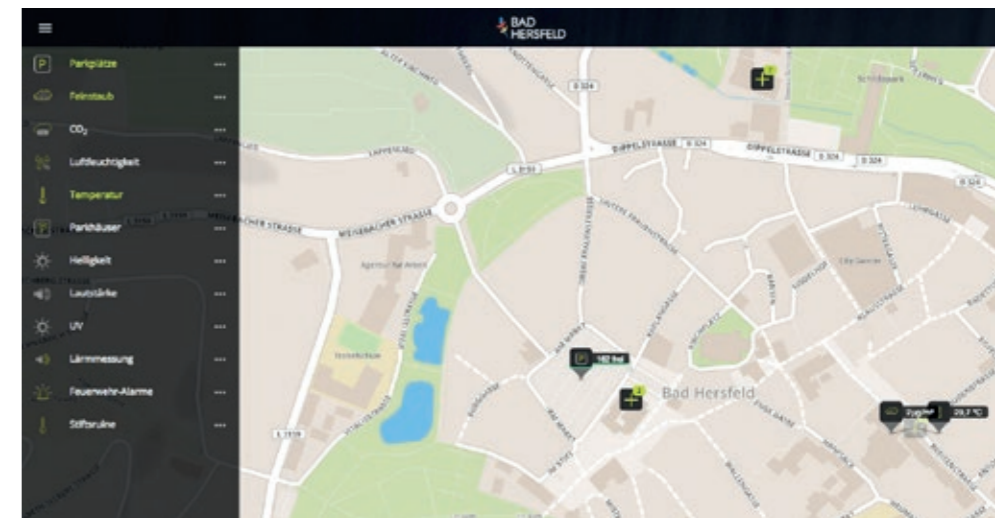
In this way, benefits can be created without creating danger. This is referred to as open urban data platforms.

Our [ui!] UrbanPulse is the core we have developed. Based on that, we have looked at and considered selected topics from the challenges already mentioned where we can offer added value.

For example, we have developed traffic forecasting methods for traffic light circuits that show how to get through the city at a certain guideline speed without stopping. The procedure is not deterministic, because it depends on the traffic situation.

In this process, we use the new and hotly debated artificial intelligence, so-called "machine learning". This means that the algorithms "learn" how the traffic lights should be switched based on the behaviour of the city and the traffic participants.

We also deal intensively with air quality and environmental data collection. This has gained a lot of attention due to the diesel scandal. We are looking at how to set up a microclimate register because we have a very



The open data platform of the city of Bad Hersfeld displays a variety of information in real time – such as fine dust pollution, the temperature or the number of free parking spaces.

present problem in the city: The measuring points which measure excess nitrogen oxide are mostly city hubs.

However, there are only a few of them. In Hamburg there are maybe ten in total – no more.

Further calculations are only mathematical models that experts can use to predict air quality values. Whether the value is really correct or not, no one can say. In the case of the confrontation related to imposing bans on diesel-powered vehicles, values that can really be relied on are needed. However, these are only available at the above-mentioned isolated points.

How are decisions to be made on this basis? We say it is necessary to have lots of measuring points. However, the expensive measuring stations cannot be in a large number of locations around the city. That's where streetlights come into play. Nowadays there are small IoT (Internet of Things) devices, which of course do not have the accuracy of these large measuring stations but are accurate enough to show a trend.

By attaching such environmental sensors – especially to the ideally positioned streetlights – there are considerably more measuring points than has been the case up to now. To start with, the city receives trends in the measurement results as a basis, so to speak, for further need for action. For example, this can be a measurement, permissible in court, at a newly created hotspot, leading to a driving ban.

Noise is also part of environmental data collection and thus also measured but hardly discussed. Noise is a disease driver. The measurement can be performed using additional microphones in or on street lights, which are ideally suited for this purpose.

**Excursus data**

Prof Dr Lutz Heuser on the subject of data, its handling and security.



[www.hess.eu/en/Inspiration\\_Effizienz/Interview/Exkurs\\_Daten\\_Prof\\_Dr\\_Lutz\\_Heuser/](http://www.hess.eu/en/Inspiration_Effizienz/Interview/Exkurs_Daten_Prof_Dr_Lutz_Heuser/)

**Live-data from Bad Hersfeld (Germany)**

[badhersfeld.urbanpulse.de](http://badhersfeld.urbanpulse.de)



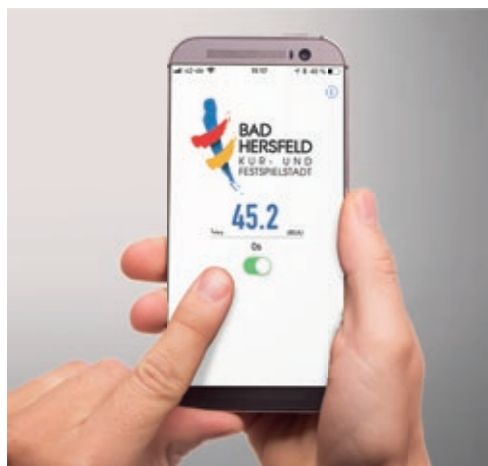
On the "Urban Cockpit" data platform developed by [ui!] the urban institute, various urban data streams are merged. The signals are converted into comparable and usable data and displayed in real time as the "pulse of the city".





Noise can also be measured using an app on a mobile phone, as is currently the case in Bad Hersfeld. Citizens can download the app and make 30-second recordings.

The app on the mobile phone immediately calculates whether it is real street noise or not and restores the data to our data platform. With this mobile information, we supplement the data from the static infrastructure.



In Bad Hersfeld, citizens can participate in noise measurements using an app.

This led to the residents of Bad Hersfeld being mobilised in a positive sense and taking an active part in the noise measurements. As a result, the acceptance of the data collection is correspondingly high.

And even if the measurements can't stand up in court, the trends are sufficient to lead the dialogue in the right direction.

**What are the initial discussions with a city and municipality like?**

**Prof Heuser:** The cities are approaching us, but they are still quite non-committal. What is already working really well is networking. We founded the Smart City Forum, which now has over 200 members.

In this network, the members are able to exchange experiences in an informal setting and talk about where action can be taken in Smart City action areas.

*“Cities in which the Lord Mayor or Mayor does not take charge and manage this task have a hard time making any progress in this direction.”*

One clear finding is that cities in which the Lord Mayor or Mayor does not take charge and manage this task have a hard time making any progress in this direction. We as service providers have to talk to different offices. There are areas of responsibility that are defended and nurtured.

That's why it is necessary for the Mayor to make a clear statement that they want an existing problem to be solved jointly as a team. For this reason, I begin my talks with the Mayor.

**How do you approach such a project?**

**Prof Heuser:** You convince the decision-maker, that is, the Mayor, to work together on the project with the various offices and different areas of administration as well as the infrastructure operators. This is not a subject that can be delegated to one specialist unit or one office.

The EU also speaks of the “integrated planning” that is necessary to become a Smart City. For integrated planning, you have to get together and not let every individual do the planning.

**Where do you see the biggest challenges here?**

**Prof Heuser:** The biggest challenge is when the Mayor or the management level of the city does not take over this management task. Then you end up discussing responsibility and authority. Many large cities have been stuck on this issue for years – the responsibilities between the different levels have not been unambiguously clarified.

As a result, there are many Smart City projects but no coherent Smart City strategy. It is doubtful whether these projects in sum will be able to get the results that they would be able to as an overall strategy.

That's why it's very important that this idea is taken up and initiated by the Lord Mayor or Mayor.

*“For me, outdoor lighting is where digitalisation happens. The luminaire is the digital hub, as they say. It is in the right place, it has electricity, and it offers space for accommodating additional functions.”*



Many decision-makers feel unsure about digitalisation and delegate it to an “expert”.

What they fail to recognize is that the expert then stands with the others as a “peer”, as someone of equal rank, and thus has no right to simply make things happen.

While all other teams are vertically structured and everyone takes care of their own responsibilities, Smart City is a horizontal, overarching subject that connects various parts with each other.

A specific example: In the city of Bad Hersfeld, the IT manager, with the support of the Mayor, can change the city's procurement law so that the city only purchases products which are Internet-enabled and for which it is ensured that the data from these products can be uploaded to the city data platform.

This is an intervention in the way the city is run – only products that are compatible with this integrated philosophy may be ordered. It is imperative that the management level of the city grapples with digitalisation.

**What specific added value can outdoor lighting contribute?**

**Prof Heuser:** For me, outdoor lighting is where digitalisation happens. The luminaire is the digital hub, as they say. It is in the right place, it has electricity, and it offers space for accommodating additional functions.

For many, outdoor lighting is still a mere public service. It has the function of providing light at night. You can also say that the luminaire is a cost factor.

With the digital hub and the resulting opportunities to create new business models and new services, a city is in a position to provide much more than just public services with outdoor lighting.

I can either provide services there directly or earn money from data provided – such as through assistance in searching for parking spaces.

In this way, every outdoor luminaire will eventually become a profit centre, for which a city can calculate how much this location will bring in. This is a completely new approach and, from my point of view, the added value that outdoor lighting will provide.

It will become the digital hub and profit centre of the city, with light continuing to be the city's public service and many other services not only compensating for the light but also earning more in future than the investment for the overall exterior lighting system.

**Have you already integrated functions in outdoor luminaires that go beyond lighting in your projects?**

**Prof Heuser:** Yes – sensors for environmental data collection, WiFi and security functions, for example. The latter is a very important topic. It ranges from camera systems to loudspeakers through to emergency call buttons.



The most interesting project we've implemented is in the city of Cairns in Australia: an amusement park for families that had a security problem due to uninvited guests.

Since we equipped the lighting with additional security functions, the situation has improved significantly.





**As a software company, what specific hardware components do you offer to the city?**

**Prof Heuser:** We are a software company, no question about that. But as a trusted advisor, we always assume the function of system integrator or general contractor.

For system integration, we work together with the luminaire, pole and component manufacturers and bring the individual elements together to form an integrated solution – if there are no suitable multifunctional lighting systems on the market in which we can accommodate the appropriate solutions.



Our strengths are the IT components and especially the software components. For example, the quality of environmental sensors common on the market varies greatly.

Particularly in this area, we have built up very good expertise and developed our own sensors. It is also against this backdrop that many cities approach us and ask for an overall offer.

**What are the “smart” benefits for the city or municipality through integration of additional functions into multifunctional luminaires?**

**Prof Heuser:** This particular benefit results from the fact that the luminaires are located where people spend time. The city uses the existing infrastructure of lighting with access to electricity without significant additional expenditure.

The alternative would be to place these additional functions in grey boxes, as people are used to seeing with telecommunications providers. This would mean laying additional powerlines and placing these boxes every 50 metres to ensure seamless coverage with built-in WiFi and environmental sensors. From my point of view, this would have a negative effect on the city’s appearance.

**“After all, lighting also has something to do with aesthetics and design – and it is much easier for the city planner to get excited about an attractive luminaire.”**

Avoiding this is thus also in the interest of the city planner. After all, lighting also has something to do with aesthetics and design – and it is much easier for the city planner to get excited about an attractive luminaire that only marginally reveals a small antenna or camera than another grey box.



Using a luminaire – a CITY ELEMENTS from Hess in this case – seamless WiFi coverage can already be provided. It is also perfectly integrated for a clean appearance.

**Where do you see further potential for Smart City applications?**

**Prof Heuser:** Without doubt, there is further potential. We don’t know what we could know because developments in this area are very dynamic. We have developed the standard DIN SPEC 91347, which focuses on the integrated multifunctional streetlight, the so-called imHLa (integrated multifunctional Humble Lamppost).



Standard DIN SPEC 91347 describes integrated multifunctional luminaire poles as interlinked and integrated systems.

The term “humble” refers to the inconspicuous streetlight that has now become the digital hub. It becomes an “integrated multifunctional hub” because it includes many additional functions.

We considered 14 different standard functions, one of which was a drone landing pad. Two years ago, this was still a utopian vision. At the Smart City World Expo in Barcelona 2017, however, a light pole with a drone landing pad was actually exhibited.

Our idea for this drone landing pad was that, if an accident occurs nearby and a drone flies there within one or two minutes, it can send a picture of the situation to the departing emergency vehicles in order to ensure the fastest possible first aid.

In future you can expect that there will be such drones in the city.

This could become an important application in a few years and these drones could then also be used for other purposes, such as for the delivery of medicines.



In future, self-driving cars will communicate with multifunctional luminaires in particular – directly and therefore extremely quickly.

The second major topic is referred to by the automotive industry as “v-to-x”, that is, “vehicle-to-infrastructure” communication. This means that the luminaire “speaks” to the vehicles directly and with no intermediary. Such functionality will be used to support autonomous driving.

Optimally positioned luminaires can record data and send the message indicating a possible danger to vehicles with “v-to-x” functionality, for example. Such scenarios are already being considered but not yet implemented. In the next five years, these features will be showing up in the first cities.

At the latest when autonomous vehicles become common in cities, technologies like this will be absolutely necessary. Since there are streetlights every 50 metres or so even in the smallest town, they are ideally suited for this application.

**Thank you very much for the interview, Prof Dr Lutz Heuser.**

**“Optimally positioned luminaires can record data and send the message indicating a possible danger to vehicles with “v-to-x” functionality, for example.”**

The luminaire will directly provide cars with additional information about possible sources of danger – such as information about a child who is running by. Very short response times are required here so that the vehicle can react quickly. This will be the next wave of applications.

What information do these vehicles need to be able to safely move about in normal road traffic? Autonomous vehicles can only “look” as far as their own sensors can see. If autonomous vehicles are travelling at 30 to 50 km/h and the field of vision does not cover these sources of danger, they have to rely on additional information.





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## U.S. Bank Stadium, Minneapolis (US) Arena of superlatives

The multifunctional U.S. Bank Stadium in Minneapolis is home to the Minnesota Vikings – the famous American football team of the National Football League (NFL).

But it's much more than that – it's a sports and events facility of superlatives.







Impressive Architecture: The U.S. Bank Stadium with its huge glass façade attracts visitors magically. The multifunctional illuminating columns CITY ELEMENTS by Hess blend in with the outdoor space.

The U.S. Bank Stadium in downtown Minneapolis, Minnesota, impresses with its spectacular architecture and a gigantic glass façade that reflects the city skyline in a way that is simply breathtaking.

The home of the Minnesota Vikings of the NFL and the University of Minnesota basketball team, the modern arena is a venue for prestigious sporting events.

In addition, it is used throughout the year as an event location for concerts, festivals, shows, school sport and college events, conferences and other major events. Popular musicians such as Taylor Swift and Ed Sheeran pass through its doors.

The outdoor area, known as Medtronic Plaza, and the entrances to the multi-purpose stadium are attractively illuminated by multifunctional CITY ELEMENTS from Hess.

The modular illuminating columns meet a wide variety of lighting requirements and also have additional safety and communication functions.



The Medtronic-Plaza: A plaza with a feel-good effect.

**Culture and climate were the primary influences on the design**

To emphasize the connection between the stadium and the city, the planning team of the renowned American office, HKS Architects from Dallas, seized upon the special landscape features and the Scandinavian roots of many Minneapolis residents, which also came to bear in the name of the Minnesota Vikings.



A reminiscence to the Scandinavian roots: The replica of a Viking ship.

The angular architecture of the building is based on the winter ice formations of the nearby St. Anthony Waterfalls and on the shape of Viking longships and longhouses.

**Innovative roof construction made of ETFE film**

Another unique feature is the sloping roof structure, 60 percent of which consists of a transparent and weather-resistant ETFE (ethylene tetrafluoroethylene) membrane. This ETFE membrane protects the interior from rain and snow while ensuring outstanding natural lighting.

For the 66,200 spectators on a total of seven stadium levels, this means a pleasant feeling throughout the year of being in the outdoors in an “air-conditioned” environment.

Since winters are quite cold and snowy, heating costs account for a large part of energy consumption – and in accordance with this, heating cost management was also a key element of the planning. The angular building shape chosen enables a completely new kind of air circulation.

The pitched roof forms an internal “heat reservoir” of solar energy, thus functioning as a natural snow-melting system. During the cold season, vertical pipes dissipate the warm air from the heat reservoir near the roof and distribute it evenly in the stadium and seating areas.



Imposing: The glass façade and the roof made largely of foil provide a light-filled stage. The outdoor area is lined with CITY ELEMENTS 230 at different heights.

**Award-winning sustainability concept**

The innovative design of the sports facility and the particularly energy and environmentally friendly building concept earned the stadium the respected “LEED Gold” sustainability certificate from the American Green Building Certification Institute (GBCI).



“LEED GOLD”-Certificate

In addition to the efficient lighting, the offer of parking spaces is also sustainable as there are virtually none. Only 200 parking spaces are available, reserved for players.

Spectators and visitors can reach the stadium by public transport and via the existing city car parks, which are connected to the stadium via footpaths and pedestrian bridges. A total of 32,000 public parking spaces are available within a walking radius of just 20 minutes.

In addition to the “LEED Gold” certification, the stadium won another award. At the World Architecture Festival 2017, the arena was the winner in the “Sports” category.





## Lighting concept

***“The simple shape of the luminaire combined with the option of integrating cameras, WiFi and additional spotlights into the luminaire at security checkpoints made a considerable contribution to reducing the lighting design to a few luminaire locations while still meeting the versatile safety requirements of a modern sports facility.”***

JTH Lighting Alliance, Minneapolis

**Outdoor lighting: Focus on multifunction and design**

Closely interwoven with the experiential character and iconic design of the building is the lighting solution for the outdoor area of the stadium. In cooperation with the landscape architecture firm Oslund and Associates, the lighting designers from Illume Lighting Design and The Lighting Agency in Denver, Colorado were looking for a minimalist luminaire that would match the unusual building architecture and also offer potential solutions for lighting, security and communication components.

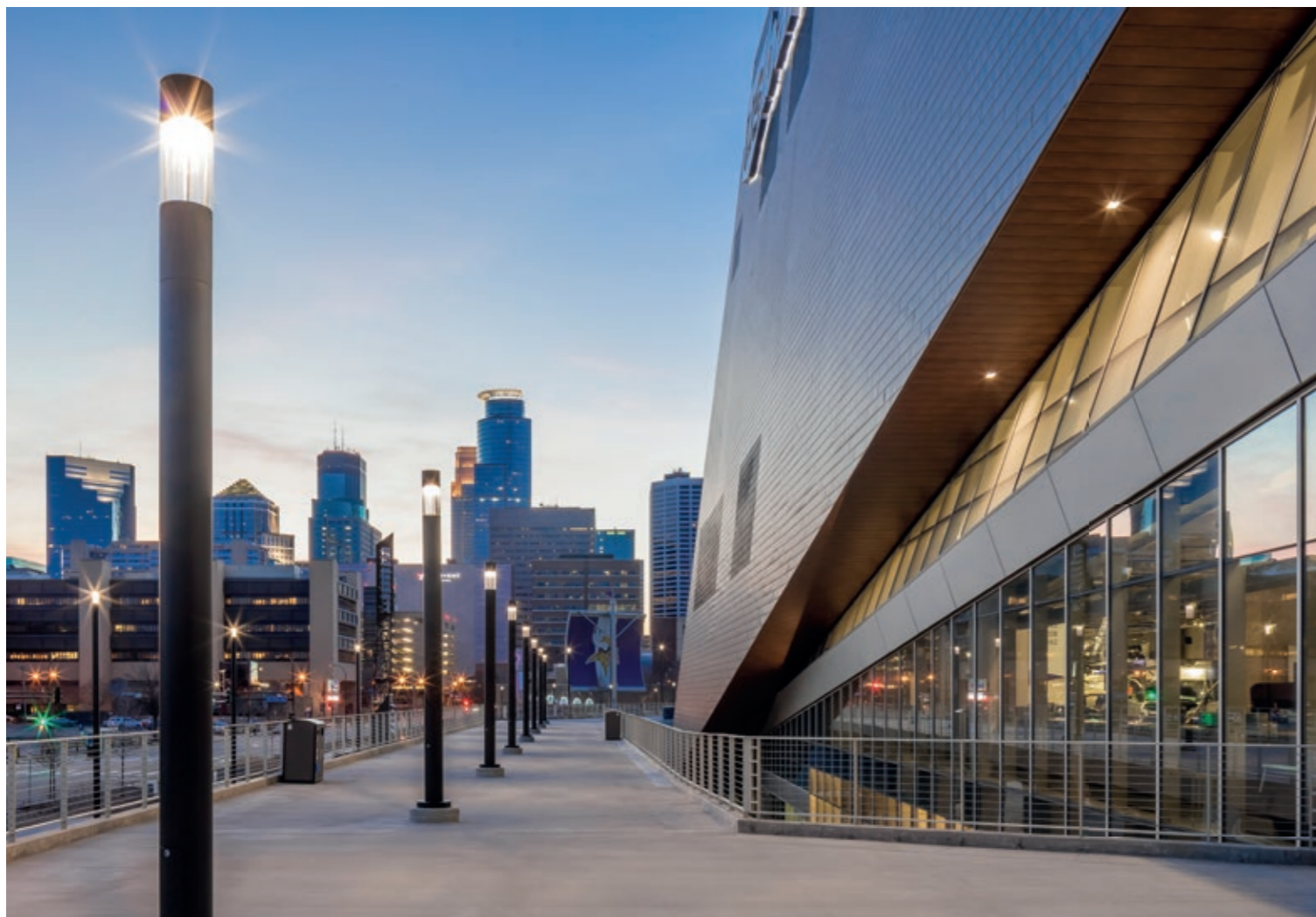
The multifunctional and modular CITY ELEMENTS featured precisely the variety of applications that planners were looking for: several functions concentrated in a single straightforward luminaire system.

“The simple shape of the luminaire combined with the option of integrating cameras, WiFi and additional spotlights into the luminaire at security checkpoints made a considerable contribution to reducing the lighting design to a few luminaire locations while still meeting the versatile safety requirements of a modern sports facility,” say the project participants from JTH Lighting Alliance in Minneapolis, who was involved as territory agent during the installation process.

A total of 71 CITY ELEMENTS illuminating columns with a diameter of 230 mm were installed. Nine different CITY ELEMENTS versions – ranging between four and nine metres height – create an inviting ambience and a high feeling of security.

usbank  
stadium





The CITY ELEMENTS line the paths around the stadium - elegant and restrained at the same time.

**CITY ELEMENTS provides basic LED lighting from different heights**

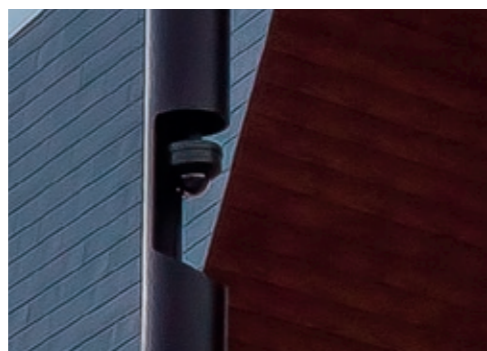
At the locations in the middle of the pedestrian zone, the four- and eight-meter-high CITY ELEMENTS have AR900 terminating elements, from which high-power LED modules with rotationally symmetrical emission characteristics provide uniform lighting.



In the areas near the edge, nine-metre-high CITY ELEMENTS with AA900 terminating elements and integrated shading ensure homogeneous illumination where it is wanted.

**Cameras, WiFi and spotlights at selected locations**

At strategically important junctions, the CITY ELEMENTS are equipped with a variety of additional functions. For example, 17 luminaires were equipped with devices for recording with security cameras.



The integrated cameras provide at neuralgic points the necessary overview of what is happening.

Lighting and Wi-Fi components were included in other luminaires. The latter equipment provides unrestricted access to network services in the outdoor area at the numerous events and ensures that fans are involved in what is happening in an entertaining manner.

**U.S. Bank Stadium – a crowd puller**

Since it opened in summer 2016, the U.S. Bank Stadium has become one of the world's leading stadiums. To date it has had more than three million visitors.

The biggest sporting highlight was the Super Bowl – the champi-



onship game of the National Football League – in February this year.

The first event for basketball fans is just a few weeks away: From 30 November to 1 December 2018, seven regional men's

teams will meet at the “Basketball Classic” – and exciting experiences for fans are already promised in the run-up to the “Final Four” mega-event of the NCAA (National Collegiate Athletic Association) in 2019.

**Designers and participants**

Client: Minnesota Sports Facilities Authority  
 Architecture: HKS Architects, Dallas  
 Landscape architecture: Orslund and Associates, Minneapolis  
 Lighting concept: Illumine and The Lighting Agency from Denver, Colorado / JTH Lighting Alliance from Minneapolis, Minnesota  
 Luminaires: Multifunctional CITY ELEMENTS 230 illuminating columns with camera, WiFi and spotlight modules  
 Images: Brandon Stengel – www.farmkidstudios.com, SC Railing, Jeff Bukowski, Pinkcandy, Gian Lorenzo Ferretti Photography, jimkruger, JoeChristensen





# CITY ELEMENTS – The multifunctional lighting system

Not only the lighting designers of the U.S. Bank Stadium rely on CITY ELEMENTS by Hess – the modular lighting system is an international success story.

CITY ELEMENTS is a lighting system, that is suitable for all requirements in urban spaces as well as in front of representative buildings.

Thanks to the variety and versatility of its elements, three diameters, various lighting technologies and variable heights up-to-9-metre and even above, the system easily configures to match its specific architectural environment proportionately.



## CITY ELEMENTS 200

The new cutting edge in the field of multifunctional lighting columns

An evolution in light and multifunctionality represents the new multifunctional illuminating column CITY ELEMENTS 200.

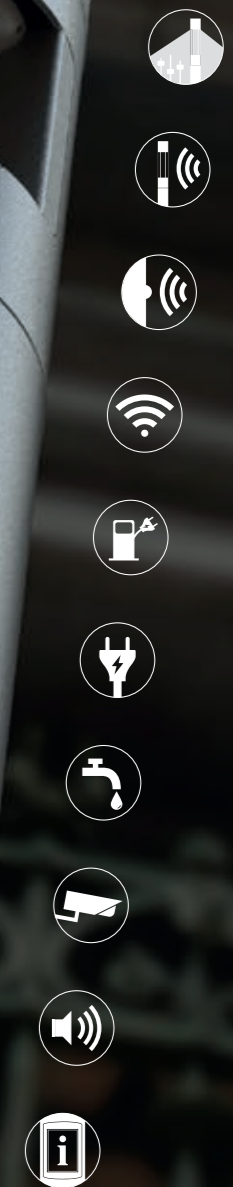
With a diameter of 200 mm and many inventive innovations, the CITY ELEMENTS 200 is destined for attractive design and solution concepts in urban environments.

The CITY ELEMENTS 200 is extremely easy to handle, that is to say, easy to set up and easy to install – in any wheater!



Simply variable,  
simply multifunctional –  
simply smart.

CITY ELEMENTS 200



CITY ELEMENTS 200



Download PDF

CITY ELEMENTS 180 / 230



Download PDF

CITY ELEMENTS 180  
Illuminating Bollard



[www.hess.eu/3400](http://www.hess.eu/3400)





Zurich, Switzerland

# Successful interplay of architecture and lighting

As a lucrative location and strong economic area in Switzerland and Europe, the city of Zurich meets the highest standards for an attractive living and working environment, thus offering ideal framework conditions for established companies as well as the best prerequisites for start-ups that wish to locate there.

The young district of Glattpark/Opfikon in Northern Zurich is an up-and-coming business centre.

Centrally located between the city centre and the airport, this district is home to the Ambassador House, one of the largest office buildings in Switzerland in terms of floorspace.

The building was built at the end of the 1980s and has now been completely redesigned as part of a general renovation.

### Business centre with variable office concepts

The ultra-modern business centre has a total of 57,000 square metres of usable floorspace spread over seven floors – roughly the size of a football pitch, per storey. Around 38,000 square metres of leasable office space can be flexibly subdivided.

On the ground floor and parts of the first floor, a restaurant as well as conference, retail and fitness rooms provide additional comfort.

### Building recognised with “LEED Platinum” sustainability certificate

Fulfilling standards in terms of energy efficiency and economy earned the office building the highest possible “LEED Platinum” seal of quality for sustainable construction. The certificate of the U.S. Green Building Council is a worldwide certification for particularly environmentally friendly, resource-conserving and sustainable construction.

The high quality standard is also the basis of the new exterior lighting with straight-lined LINEA 6000 design pole mounted luminaires from Hess, which are installed at the entrance and along the landscaped area around the Ambassador House.



Offset luminaire heads ensure even illumination of footpaths and green areas.

Three other LINEA luminaires (single headed) with a height of 6 metres are installed in the entrance area of the building, ensuring that the lighting situation is inviting.



### Focus on lighting quality and efficiency

“Since the building is subject to LEED requirements, targeted and efficient illumination of the areas was important to us,” explains Jennifer Sippel. To this end, all design luminaires were equipped with several powerful LED modules in the light colour 4000K.

### Outdoor lighting: Beautiful design – that complements the architecture

A clear structure for the exterior lighting that would complement the cubic architecture – that was the design requirement, along with many other key considerations of the lighting concept developed by Planungsbüro Reflexion AG of Zurich for the outdoor area of the Ambassador House.

“The elegant design of the LINEA luminaires discreetly blends with the striking structure of the building,” says lighting designer Jennifer Sippel from Reflexion.

*“The elegant design of the LINEA luminaires discreetly blends with the striking structure of the building.”*

For a uniform appearance of the building and lighting, the LINEAs were coated with lacquer in the colour “Mica Anthracite”. This allows the luminaires’ simple elegance to come into its own even more during the day, while they literally merge with the architecture of the building in the evening and night hours.

### Special solution with project-specific arranged luminaire units

In order to illuminate the pavement and the adjacent green area from one luminaire, some of the LINEAs were adapted to the project and have two luminaire heads – offset by 180° – at different heights.

The lower luminaire head with a projection of 1200 mm is located at a height of 3.96 metres and illuminates the green areas, while the higher luminaire head with a projection of 1500 mm is at 4.65 metres and illuminates the footpath.



Depending on the location, different optics ensure the extremely precise and homogeneous illumination which is desired for the selected areas.



With their clear expression of design, LINEA luminaires fit perfectly into the architectural environment.



LINEA  
www.hess.eu/1111

### Designers and participants

Client: community of owners of the Ambassador House

Lighting design: Reflexion AG, Zurich

Luminaires: single-headed and offset double-headed LINEA 6000 luminaires, adapted to the specific project

Images: Hess



# Drusenheim, France Church square in new light and design

Drusenheim am Rhein is a tranquil community about 25 kilometres north of Strasbourg in scenic northern Alsace.

The municipality bears the title “Ville Fleurie” (town decorated with flowers) – to which a sign with 4 flowers at the entrance points. Thus Drusenheim is one of the nine municipalities of the department of Bas-Rhin, who have received this prestigious award.



The competition of flower-adorned towns and villages with a recognition of one to four flowers was launched in France in the late 1950s to promote flowering green spaces.

“This prize is awarded for the flowers – the Altwasserpark is the perfect example of nature in the center of our municipality – but also and especially for the pleasant living environment that is offered to the approximately 5300 inhabitants of the city,” explains Jacky Keller, mayor of Drusenheim.

A special architectural ornament of the municipality is the catholic church Saint Matthieu in neoclassical style. The church square – a popular meeting place – has been redesigned with natural stone pavement, freshly planted trees, added parking spaces and an attractive lighting solution with illuminating columns of the RESIDENZA C and CITY ELEMENTS 180 types from Hess.



Following the redesign, the church square has become significantly more attractive.

### Luminaires fit perfectly into the newly designed area – and enhance the square

“As a replacement for the old, outdated lighting, we decided on simple and restrained luminaires to upgrade the entire church square with the added parking areas,” says Robert Trimole, Director of Technical Services Drusenheim.

The slimline design of the RESIDENZA C and CITY ELEMENTS 180 was exactly what the community wanted. In addition, the Hess luminaires offer state-of-the-art lighting technology.

“Energy efficiency and high quality of light were crucial criteria in the selection of luminaires,” explains François Gervais from the participating installation company, Tellos.

The RESIDENZA C models with a height of 4.6 metres were installed around the church square and at the parking spaces.

They are equipped with powerful LED LEVO3 modules in light colour 3000K, ensuring uniform illumination of the desired areas in the evening and at night.

*“Energy efficiency and high quality of light were crucial criteria in the selection of luminaires.”*



RESIDENZA C luminaires (left) and a tailor-made CITY ELEMENTS 180 (right) ensure high lighting quality.



The statue of Christ opposite the church square is effectively staged by a CITY ELEMENTS illuminating column.

A CITY ELEMENTS 180 configured specifically for the project takes care of the additional illumination of the restored monument to fallen soldiers on the church square as well as the cross with Christ statue on the opposite side of the street.

The column luminaire, which is also 4.6 metres high and 180 mm in diameter, is equipped with two BS 400 intermediate elements whose LED spotlights, in light colour 4000K with 14° reflectors, accentuate the monuments in the evening hours.

For efficient operation, all luminaires have a control unit with DALI interface for automatic lighting control.

The luminaires lower the lighting level to 50 percent between midnight and 5 o'clock in the morning. During the remaining operating time, they light up constantly at full power.

### Special lacquer coatings – one of Hess’s many special solution competencies

In addition to the attractive lighting effect, the luminaires attract attention during the day also due to their special colour. At the request of the municipality, the RESIDENZA C and the CITY ELEMENTS 180 units were coated with lacquer in the elegant brown colour of “Akzo Nobel 650 sablé SW 308F.”

“Since 2011, this colour has dominated all elements of site furnishings. Thanks to this special lacquer finish, the new luminaires harmonise perfectly with the existing benches, waste receptacles and bollards in our community,” says Robert Trimole, summing up.



In May 2018 the church square was ceremoniously inaugurated together with other modernized local areas.



CITY ELEMENTS  
www.hess.eu/3400



RESIDENZA C  
www.hess.eu/3001

Designers and participants  
Client: Municipality of Drusenheim, France  
Participating project partners: Installation company Tellos, Herrlisheim  
Lighting: Illuminating columns RESIDENZA C and CITY ELEMENTS 180 in special design  
Images: Hess



## The new OSLO – now even more attractive!

Our OSLO surface-mounted luminaire impresses since time with its classic design, which is just as effective in modern architectural environments as it is in residential areas with zones restricted to local traffic. The luminaire enclosure, for which the OSLO is known, gives the luminaire its typical expression of design.

Now the luminaire has been further developed optically and technically.

The new OSLO is available in two variants, with or without louvres – according to individual tastes and requirements.

Thanks to technical development, it has been possible to move the electronic block into the head of the luminaire, lending the luminaire additional elegance.



With the relocation of the electronic block, the OSLO gains in clarity.

Only if the dimming system DIMPro is used, does the electronic block return to the base of the luminaire head, as more space is required for DIMPro.

In addition, the new model comes standard with a single-colour lacquer coating of the luminaire canopy. White lacquering of the inside of the canopy is of course possible as an option.

All standard dimming options (DALI, StepDIM, AstroDIM and CLM) are offered with the new version. Furthermore, DIMPro can also be used as described. The new OSLO is equipped with the compact and powerful LEVO3 LED module – for absolutely homogeneous and efficient lighting and illumination.

The new OSLO – attractive in every respect.



OSLO  
[www.hess.eu/1050](http://www.hess.eu/1050)



OSLO –  
without louvres

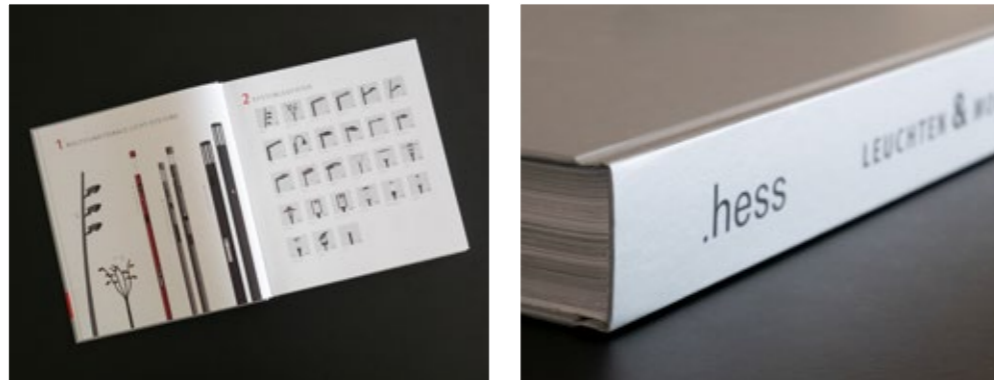
OSLO –  
with louvres



# Lighting & site furnishings: Our new catalogue

In our catalogue, hot off the press and newly published, we have brought together luminaires and site furnishings in a single volume. It is available to you in both digital and printed form.

In addition to detailed product descriptions and information, a large number of reference photos document the attractive appeal of the integrated design and lighting solutions – in keeping with our slogan “Enhancing urban spaces”.



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# Hess at the “Licht 2018” lighting congress in Davos (CH)

Exciting lecture series on indoor and outdoor lighting, intensive discussion of the use of new technologies and an accompanying exhibition dominate the programme of the European lighting congress “Licht 2018” from 9 to 12 September in the Swiss Alpine city of Davos.

With the new CITY ELEMENTS 200, Hess presented his multifunctional and innovative lighting system that offers integrated solutions for all city-centre requirements.

The CITY ELEMENTS 200 impresses with its sophisticated design made up of empty basic and intermediate elements which can be assembled in a few easy steps and equipped with self-contained and sealed inserts as required – regardless of weather conditions.

By examining a model, participants on site were able to experience the system’s easy handling and installation as well as its multifunctionality first-hand.



Jürgen Duffner, Sales Director DACH, was available for the visitors to answer all questions relating to light.

# GaLaBau 2018 in Nuremberg – with the ARINI TREE from Hess



With its inspiring landscape, the “Garden Dreamscapes” promotional space of Germany’s Federal Association of Garden, Landscape and Sport Field Construction offered the perfect setting for the ARINI TREE by Hess at GaLaBau, the leading international trade fair for green space planning, building and maintenance from 12 to 15 September in Nuremberg.

Based on a stylized tree and equipped with luminaire heads, a camera and loudspeakers, the ARINI TREE became a real highlight, with its exclusive design making lasting impressions on visitors.

Light and multifunctionality – perfectly combined in an impressive look and feel.

The ARINI TREE with surrounding bench and inductive charging option (qi) was a real highlight at the GaLaBau and invited visitors to stay a while.



# Architects, not Architecture.

Fascinating evenings with renowned architects – that’s the promise of the successful event series “Architects, not Architecture”, which Hess actively promotes and supports.

REVIEW

## Frankfurt 01

For the premiere on 18th September in Frankfurt came more than 300 architects – and experienced an exciting evening with the top architects Jürgen Engel, Claudia Meixner and Michael Schumacher.

## Barcelona 01

The successful premiere in Barcelona with the architects Benedetta Tagliabue, Andrés Jaqué and Peter Cook took place on 27th September.

A review of both events will be available soon under the following link:



[www.hess.eu/en/Unternehmen/Aktuell/Rueckblick\\_Architects\\_not\\_Architecture/](http://www.hess.eu/en/Unternehmen/Aktuell/Rueckblick_Architects_not_Architecture/)

Architects,  
not Architecture.

PREVIEW

## Copenhagen 01

11.10.2018

Location:  
Queen’s Hall, Royal Library, Copenhagen  
Doors open 6pm



**Kim Herforth Nielsen**

[www.3xn.com](http://www.3xn.com)

**Tatiana Bilbao**

[www.tatianabilbao.com](http://www.tatianabilbao.com)

**Louis Becker**

[www.henninglarsen.com](http://www.henninglarsen.com)

## Munich 03

17.10.2018

Location:  
Carl-Orff-Hall, cultural centre  
Gasteig, Munich  
Doors open 6pm



**Herwig Spiegl**

[www.awg.at](http://www.awg.at)

**Regine Keller**

[www.keller-damm-kollegen.de](http://www.keller-damm-kollegen.de)

**Helmut Jahn**

[www.jahn-us.com](http://www.jahn-us.com)

## Dusseldorf 04 | 30.10.2018

Location: Tanzhaus NRW, Dusseldorf

**Kilian Kada**

[www.kadawittfeldarchitektur.de](http://www.kadawittfeldarchitektur.de)

**Petra Wörner**

[www.wtr.architekten.de](http://www.wtr.architekten.de)

coming soon

Please register early for the events by sending an e-mail to: [marco.walz@hess.eu](mailto:marco.walz@hess.eu)

## Berlin 03 | 29.11.2018

Location: ATZE Theater, Berlin

**Volkwin Marg**

[www.gmp-architekten.de](http://www.gmp-architekten.de)

**Anupama Kundoo**

[www.anupamakundoo.com](http://www.anupamakundoo.com)

coming soon

We are already excited about taking part in the engaging and entertaining evening events – and are looking forward to many interesting conversations.



# GRIVEN – the specialist for architectural lighting solutions

Our Italian affiliated company GRIVEN has established itself as one of the leading development and manufacturing companies in the architectural lighting market worldwide – especially in the high-power segment. Distribution of the GRIVEN portfolio is handled by Hess within the German market.

The range of spectacular lighting effects that GRIVEN's innovative product and solution portfolio makes possible, as well as the know-how of GRIVEN are demonstrated by these selected project examples.

## GRIVEN CATALOGUE



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[www.hess.eu/griven](http://www.hess.eu/griven)

Riga, Latvia

## VEF Culture Palace: White is an evergreen

After a major restoration, the Palace of Culture of Riga has recently reopened its doors celebrating its new architectural and organizational layout with a series of cultural events.

As part of this recent comprehensive renovation programme, a new LED lighting system has been installed at the VEF palace by the Latvian company LUCIDUS SIA to enhance its exterior and interior architectural structure with a smart combination of warm and cold white light.

Fitted with a compact body and mounting bracket for an easy installation, the chosen linear modules of the PARADE D-W-12 MK3 series offer the utmost lighting design compatibility and maximum mounting comfort.

A warm white accent was preferred by the appointed Lighting Designer Andrejs Kalašņikovs to light up the columned side and front porches of the building, while a nice shade of cool white was chosen to highlight the rest of the outside walls. This simple but effective lighting scheme, just alternating warm and cold white shades in a skillful way, is capable of reaching a breathtaking final result.

As for the interior lighting of the amazing foyer, an array of PARADE D-W-12 MK3 in warm white configuration has been installed along the perimeter of the ceiling in order to deliver a functional and decorative illumination to this beautiful area, often used to host exhibitions and standing receptions.

The chosen warm white shade discretely enhances the majestic green marble columns that frame the foyer with elegance, boosting the allure of this stylish venue while delivering a remarkable functional illumination.



Decorative lighting made of warm and cold white LED light stages the Culture Palace in- and outside.





Yeonggwang, South Korea

# A bridge linking land and tradition



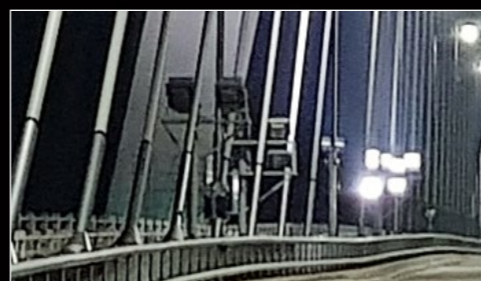
Renowned in the whole country as a ground breaking and technologically advanced infrastructure, the Yeonggwang Bridge has been recently illuminated by an innovative LED lighting system by GRIVEN.



The innovative LED lighting with dynamic color change comes out best from afar.

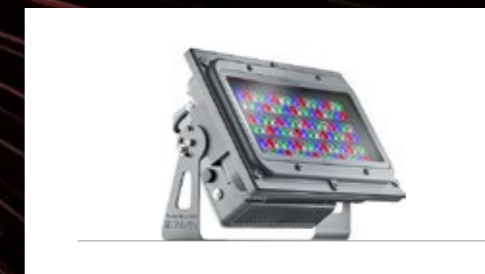
Completed in March 2018, the landscape lighting of Yeonggwang bridge is concentrated on the central part of the cable-stayed bridge, mainly illuminating its two majestic pylons and their cables.

Therefore, 56 units of Powershine MK2 D and S RGBW with spot optics were fixed in couples on sturdy metal supports located at the base of the towers in order to light them up till the top with an even light output or installed along the cable fixing points on the borders of the bridge to enlighten the metal ropes in their full length.



In order to enhance the whole length of towers and cables, long-throw lighting fixtures were required to reach a satisfying luminance level up to the top of the high structure.

To complete the lighting scheme, 8 units of Powershine MK2 S in RGBW colour configuration with medium optics and 8 units with wide optics were installed at the lower base of the two pylons to light up their basement at 360°.

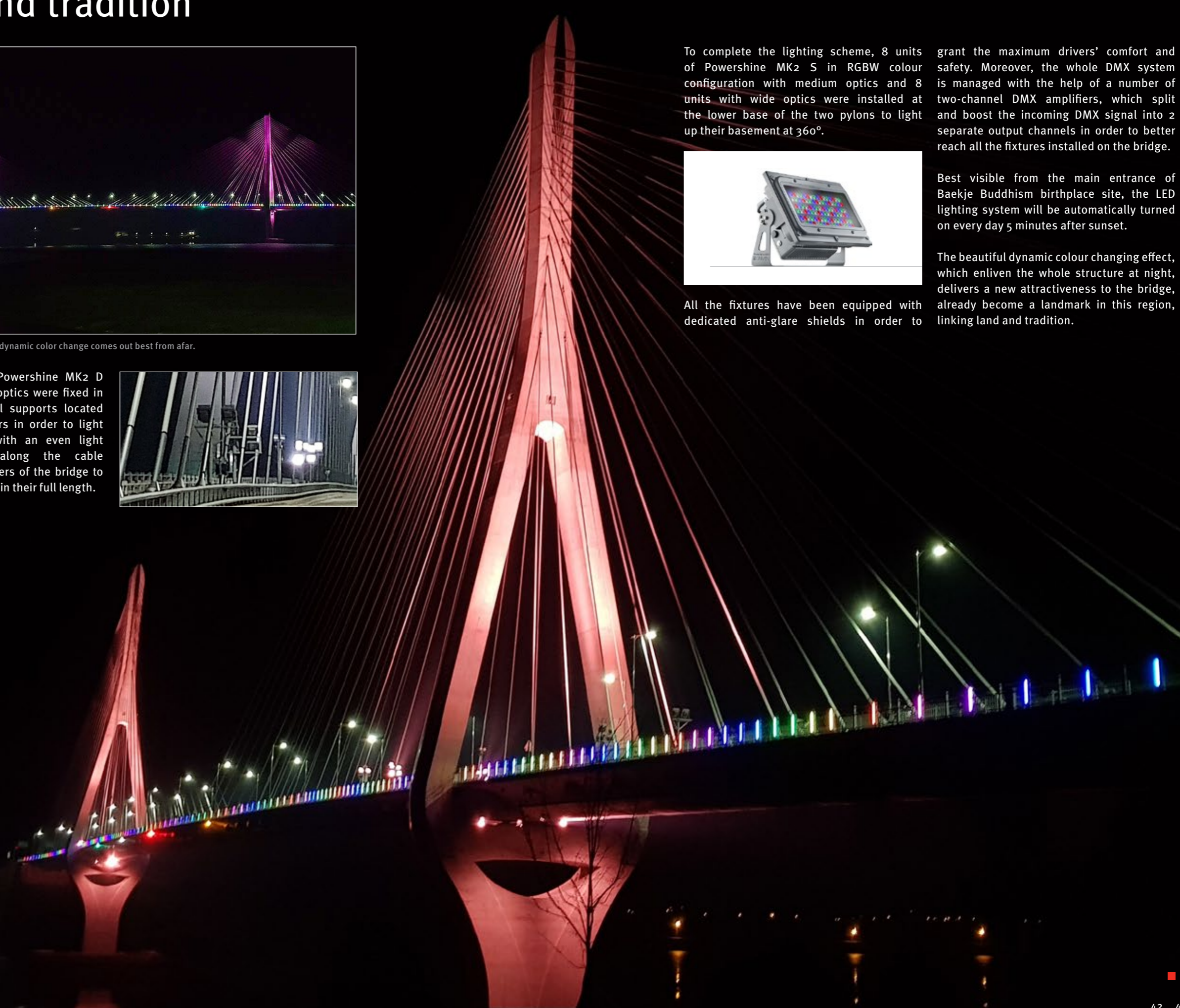


All the fixtures have been equipped with dedicated anti-glare shields in order to

grant the maximum drivers' comfort and safety. Moreover, the whole DMX system is managed with the help of a number of two-channel DMX amplifiers, which split and boost the incoming DMX signal into 2 separate output channels in order to better reach all the fixtures installed on the bridge.

Best visible from the main entrance of Baekje Buddhism birthplace site, the LED lighting system will be automatically turned on every day 5 minutes after sunset.

The beautiful dynamic colour changing effect, which enliven the whole structure at night, delivers a new attractiveness to the bridge, already become a landmark in this region, linking land and tradition.





# NORDEONGROUP

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Whether for architectural lighting, indoor lighting or outdoor lighting; whether for industrial, commercial, or office / administration purposes, for the hotel industry, public spaces, buildings or close to buildings – the collective know-how regarding applications, technology, design, specifications and adaptation makes the Nordeon Group a true full-service partner for lighting professionals – and that worldwide.



www.nordeon-group.com

www.griven.com

www.hess.eu

www.vulkan.eu

www.lamp.es

www.schmitz-leuchten.de

www.wila.com

www.nordeon.com

## PLDC 2018 in Singapore



The Professional Lighting Design Convention (PLDC) has been one of the world's most important conferences in the lighting design market since 2007.

For lighting planners, designers, architects, scientists and manufacturers, the event offers the suitable opportunity to listen to high-calibre presentations by experts, exchange knowledge and make new contacts.

Until 2017, the PLDC took place every two years in alternating European cities. From this year onwards, due to the constantly increasing number of trade visitors and growing interest worldwide, it will be taking place – also every two years – outside Europe.

The kick off therefore marks Singapore from 25 to 27 October 2018. The venue of the conference under the slogan "A smart move" is the conference and exhibition centre of the spectacular Marina Bay Sands Resort.

As a premium manufacturer of outdoor luminaires of sophisticated design, Hess – together with its sister companies GRIVEN and Lamp – will be represented with a stand.



2018.pld-c.com



## IALD Enlighten Europe in Barcelona



Another industry highlight is the international congress "Enlighten Europe", organised every two years by the International Association of Lighting Designers (IALD). Lighting designers, luminaire manufacturers, scientists, students, architects and interior designers will meet from 7 to 9 November 2018 at the Hotel Pullman Barcelona Skipper in beautiful Barcelona.

The congress programme with leading experts and thinkers from the industry includes first-class lectures, presentations and workshops on a wide range of issues relating to light in the categories of art, business and technology.

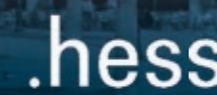
The trade event culminates with the IALD party evening on 8th November, which is actively supported by several Nordeon Group brands: Lamp, Hess, GRIVEN and Schmitz | WILA. IALD participants will be able to talk with one another in a pleasant collegial atmosphere and expand their network.

More information about the program can be found at:



www.iald.org

Members of the Nordeon Group:





# SMART CITY SOLUTIONS platform at INTERGEO trade fair



SMART CITY SOLUTIONS – consisting of SCSEXPO, SCSFORUM and SCSPLAZA – considers itself a forum, an exhibition and a congress for city planners, architects and experts from public administration who want to inform themselves about contemporary Smart City solutions, best practice examples, and projects of future-oriented urban development.

With ongoing digitalisation and the trend towards urbanisation, the demand for “smart city” projects is increasing. These new demands on the urban development mainly concern the environment, climate, mobility and how people live together in urban and rural areas.

At the INTERGEO trade fair, visitors will also have the opportunity to meet international manufacturers and companies, establish contacts and jointly develop visions for new Smart City projects.

INTERGEO (16–18 October 2018 in Frankfurt am Main) assigns great importance to this development and has created the thematic platform SMART CITY SOLUTIONS especially for it.



[smartcitysolutions.eu/en/](http://smartcitysolutions.eu/en/)  
[smart-city-solutions-3/](http://smart-city-solutions-3/)

#scsexpo

# GLOW: Festival of light art in Eindhoven (NL)

Every year during the GLOW Light Festival, light artists, designers and young talent give the Dutch city of Eindhoven a new face with spectacular stagings of light. Façades, public squares and streets become the backdrop for unusual light installations and projections, which attracted some 740,000 visitors last year.

The event, which is one of the five most visited light festivals in the world, will be devoted to the theme of “Light and Shadow” this year and take place from 10 to 17 November.

Visitors will be able to closely examine the more than 30 works of art from 6:30 pm to 11 pm on the five-kilometre GLOW route through the city centre and discover the Design and Technology Centre Eindhoven from a whole new side at night.



Photo: Bart van Overbeeke



[www.gloweindhoven.nl/en](http://www.gloweindhoven.nl/en)

# Fête des Lumières in Lyon (FR)

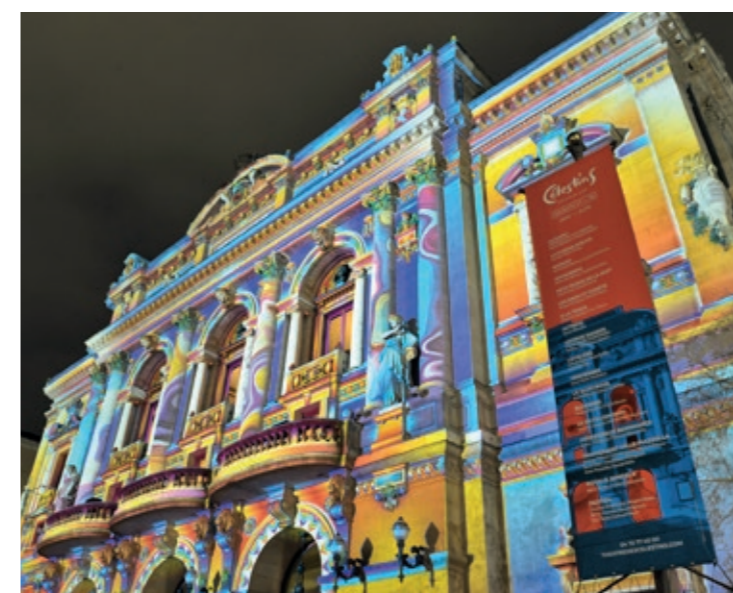


Lyon is worth a visit – and that’s particularly true in December. During the “Fête des Lumières” from 6 to 9 December 2018, the metropolis on the Rhône will be transformed into a place of luminous poetry. The spectrum of the Festival of Lights ranges from the colourful illumination of historical monuments and bridges to 3D animations and the creation of radiant, mobile objects, making it one of the most beautiful festivals of its type in the world.

An audience of millions from all over the world will not pass up the opportunity to experience this unique event, whose roots go back to the 19th century. Numerous events such as music concerts and street theatre enrich the four-day programme.



[www.fetedeslumieres.lyon.fr/en](http://www.fetedeslumieres.lyon.fr/en)



Photos: M. Chaulet/Ville de Lyon; F. Guignard-Perret/Ville de Lyon



## IMPRESSUM

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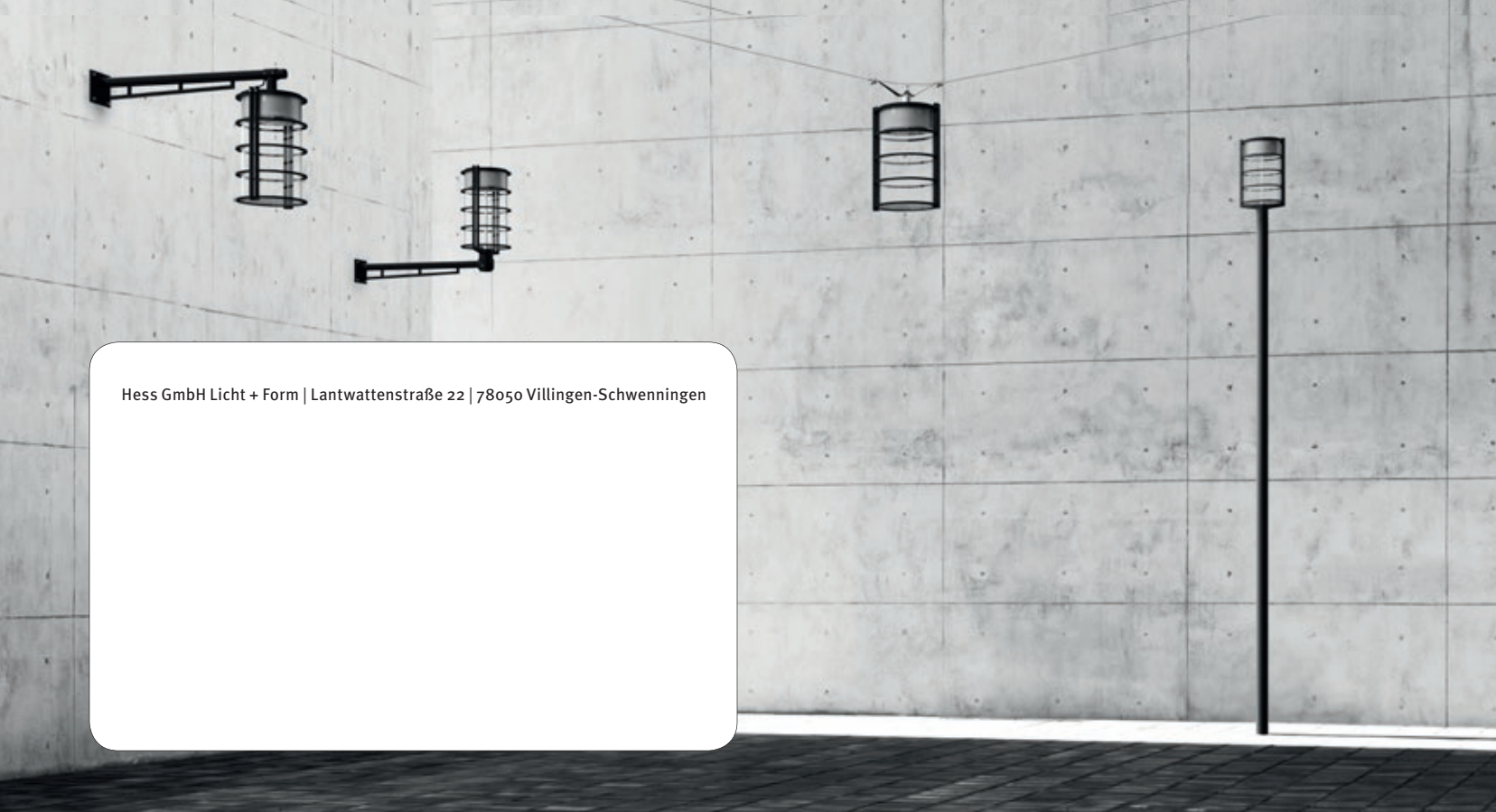
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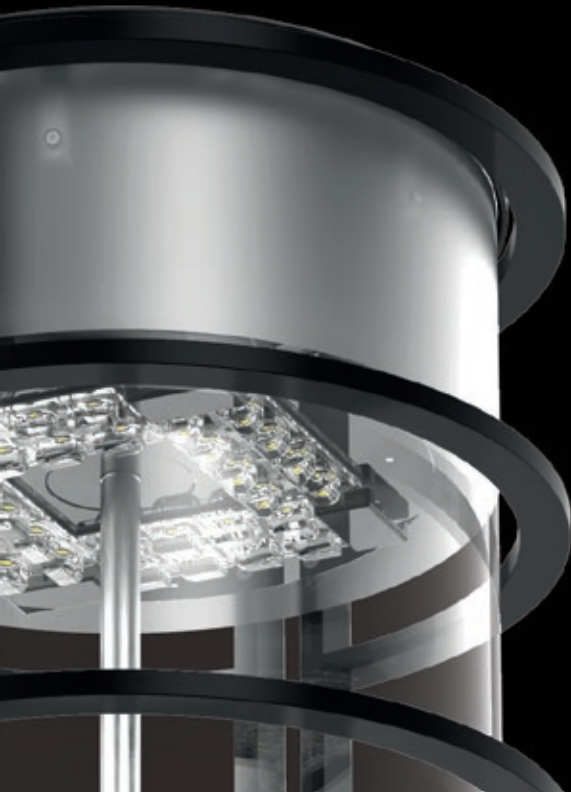
Appearance:  
Three times a year





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