Edition 2 | 2019

.hess

LIGHTLETTER by Hess

SENSOR TECHNOLOGY

When machines and luminaires feel

Dear Sir or Madam,

Machines and luminaires are becoming more intelligent. In particular, we owe this exciting development to sensor technology, because it is this technology that give machines and luminaires capabilities, that are normally attributed to humans. An essential part of our existence, is determined by perception, that is to say, by our senses. Seeing, hearing, smelling, touching and tasting – these abilities are a miracle of evolution and supply us with significant impressions, to help us understand the world around us and be able to interact with the world and with humankind.
In short: Our sensory system enables us to be feeling and acting beings.

With the help of technical sensors and actuators machines and luminaires are now able to gather information from their environment and react to it. Using this technology, not only is important information collected, some of it is also directly applied. Take for example smart traffic guidance systems, that control the streets of our city centres based on the current traffic situation. In this way, traffic jams can be avoided and both humans and the environment spared.

It goes without saying, that we use this groundbreaking sensor technology in our luminaires. Thus, we provide you with lighting systems that not only provide high-quality lighting and captivate with their unique design, but also that actively “participate”. Our smart luminaires can multifunctionally adapt to use and situation and supply relevant information that is immensely useful for the smart further development of your city and urban spaces.

You can already see our enthusiasm for sensor technology. That’s why we have dedicated a corresponding article in our magazine to this special forward-looking technology, allowing you too to be captivated by the ingeniousness of these sensors.

We would also like to inspire you with our reference projects. Above all with the Australian port city of Newcastle, which was even awarded the title “Smart City of the Year”, not least of all thanks to the use of our multifunctional luminaires.

A further example of the successful use of our products is the redesign of the town hall square in Zella-Mehlis (DE). In this state-approved resort in the Thuringian Forest, our luminaires adorn the new square. Here the interplay of smart lighting technology and unique design has created a “shining tuft of grass that brings people together".

You see – the new Lightletter again offers exciting topics and illuminating insights into the fascinating (sensing) world of machines and luminaires.

We hope you enjoy reading our literature.

Best wishes,

Hess GmbH Licht + Form

i.A.
Alexander Wiepen
Global Head of Sales

i.V.
Marco Walz
Head of Marketing / Communications and Human Resources

AN ORDINARY LIGHT ALLOWS US TO SEE, AN EXTRAORDINARY LIGHT HOWEVER, ENABLES US TO FEEL.

Oliver W. Schwarzmann, Economic poet

Project: Alberta, Canada (CAN)
Luminaire: Hess, CITY ELEMENTS 230 (Special version)

SMART CITY | SENSOR TECHNOLOGY

ELECTRONIC SENSES EXPLORE OUR WORLD IN A NEW WAY

When machines and luminaires feel

Seeing, hearing, smelling, tasting and touching – these are sensory abilities that developed over millions of years of human evolution, making it possible for us to get to know the world from the time we took our first steps, to admire it in all its beauty from the perspective of a sentient being and to have the ability to cultivate it for what it could give us.
In short: Life without our spectrum of biological senses would be simply inconceivable.

Our senses are the key to conscious thought and necessary in our encounters and interactions with other people. After all, they provide us with all the essential information we need to function. It is no wonder that engineers also strive to outfit their systems and mechanical creations with these kinds of wondrous characteristics.

can begin to refer to what is happening as intelligence. And all of this is no longer a dream from some distant future: Machines now survey their environment by seeing, hearing, touching and measuring it, and they are doing this faster and better than any human ever could. The species of Homo sapiens was simply made more for feeling, being amazed and appreciating, to which technical sensors certainly have a lot to contribute.

»Machines now survey their environment by seeing, hearing, touching and measuring it, and they are doing this faster and better than any human ever could.«

The right sensor for each requirement. Due to increasing interconnectedness, tangible synergies arise, which have a very positive effect on processes and resources and thus benefit the environment.

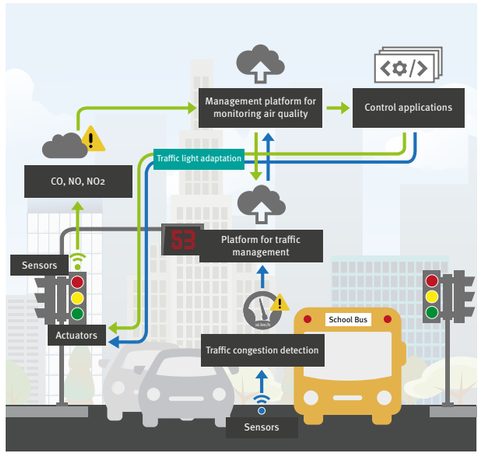
Sensor technology is what makes them possible, and its aim is quite clear: Having senses of their own allows computers to throw off the shackles of data input, and this represents a substantial advancement in computer use and information processing.

A machine with sensory capabilities no longer just completes the tasks assigned to it but instead generates its own impressions on a completely autonomous basis, thus collecting the data itself. It then evaluate this data, using its electronic brain to derive decisions and actions. At this juncture and beyond, we

Facing today's complexity better with sensor technology

Sensor technology does an excellent job, especially in our highly complicated era. It provides targeted support for modern life in many different areas: For example, it can be found in vehicles, factories and buildings as well as in engineering for medicine, safety and the environment. In addition to their numerous applications, sensors are particularly in demand in urban centres, where traffic often comes to a standstill.

This leads to enormous costs in terms of time, fuel and sheer stress, causing Germany to lose billions in economic output each year to the traffic jams that occur in its public realm. The



Intelligent traffic control makes it possible to reduce standstill times, thereby reducing fuel consumption.

bottom line of the ADAC Traffic Congestion Report shows a new, dismal record for 2018: On average, there were some 2000 traffic jams per day. We can no longer speak of free and easy mobility that is unrestricted and unhindered in large cities. This is bad for drivers, bad for cities, bad for the economy and, above all, bad for the Earth's future climate. Offers aimed at reducing the amount of travel taking place in cars with a single occupant have so far brought only minimal success. If any advances are seen at all, then they are only sporadic and temporary. In any case, traffic for the delivery of goods is continuing to increase unchecked in parallel with this.

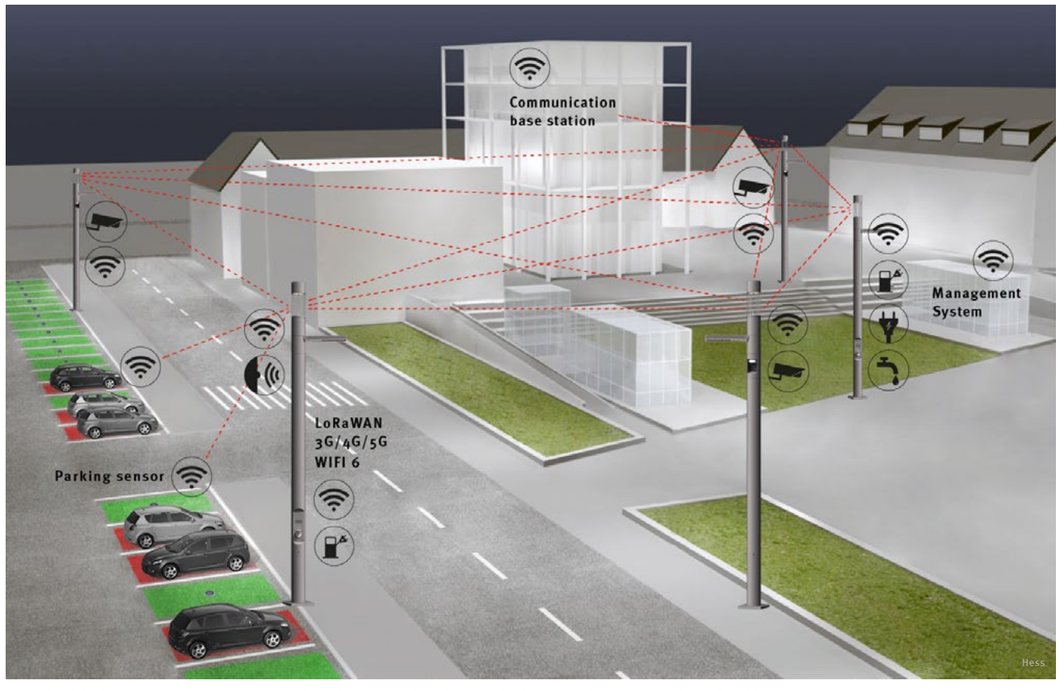
What is needed is more intelligent solutions that can do a better job of organising the growing volume of vehicles and the largely irregular and unpredictable flow of traffic. To achieve this, making use of intelligent sensors that could be easily integrated into the existing infrastructure – such as street lighting – would be a good option.

Street lights as the perfect solution

Lighting systems offer optimal opportunities for using sensor technology, because they are already located or are being newly installed in the public spaces of vibrant city centres.

In addition to energy-efficient and adaptable control of exterior lighting, the sensors integrated into the lighting system can make fantastic contributions to urban life:

Traffic sensors can control traffic lights and guide vehicles to detours and alternative routes in the event of accidents, road works and road closures; parking sensors can detect the occupancy status of parking spaces and forward this data to systems that communicate information and assist in navigation; and sensors for fine particulate matter can measure air quality on the roads. »



How about finding a free parking space or a free charging station for e-mobility? No problem, thanks to state-of-the-art sensors. The result: Time and fuel are saved and nerves are spared.

On balance, effective organisation of traffic flow, as well as collecting, linking and evaluating important data, creates the much-discussed and desired Smart City, in which the lives of the inhabitants can be improved in a sustainable way. This naturally also includes optimised mobility and greater safety.

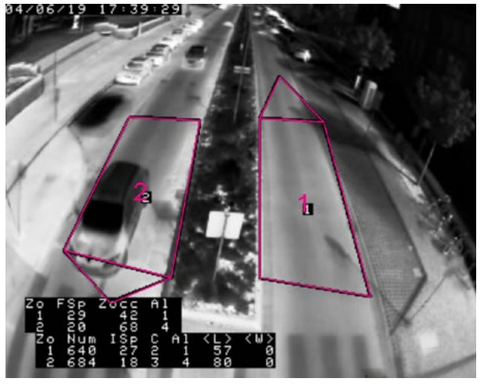
This is especially important for the world of tomorrow, because the knowledge provided by the sensors form an optimal foundation for new planning and construction measures in cities, where every square metre is extremely scarce and must be used wisely. Last but not least, traffic and environmental data are of utmost importance in an era of climate change and extreme weather phenomena.

There are also many other areas of application for intelligent street lights – from self-driving cars of the future, which require the support of external sensors for vehicle guidance, to information applications that provide tips to visitors through to security systems that offer unparalleled protection to the city and its inhabitants.

Successful interplay: Hess luminaires and SMIGHT sensor technology

Hess offers a direct path to the Smart City together with SMIGHT, a specialist for digital urbanisation of city infrastructure located in Baden-Württemberg. SMIGHT traffic sensors are installed in existing or new luminaires from Hess.

The “technical senses” can take up their work there: Thermal imaging sensors record traffic without identifying people or license plates, and a router integrated into the light pole forwards the recorded data to a computer unit for analysis.



Precise statements about the respective traffic situation with regard to the number of vehicles, their speed and exact transit times can then be made.

This is important input for cities and municipalities, which can use this information to develop specifically tailored traffic management concepts – a step towards targeted relief of congestion-prone stretches of road and intersections.

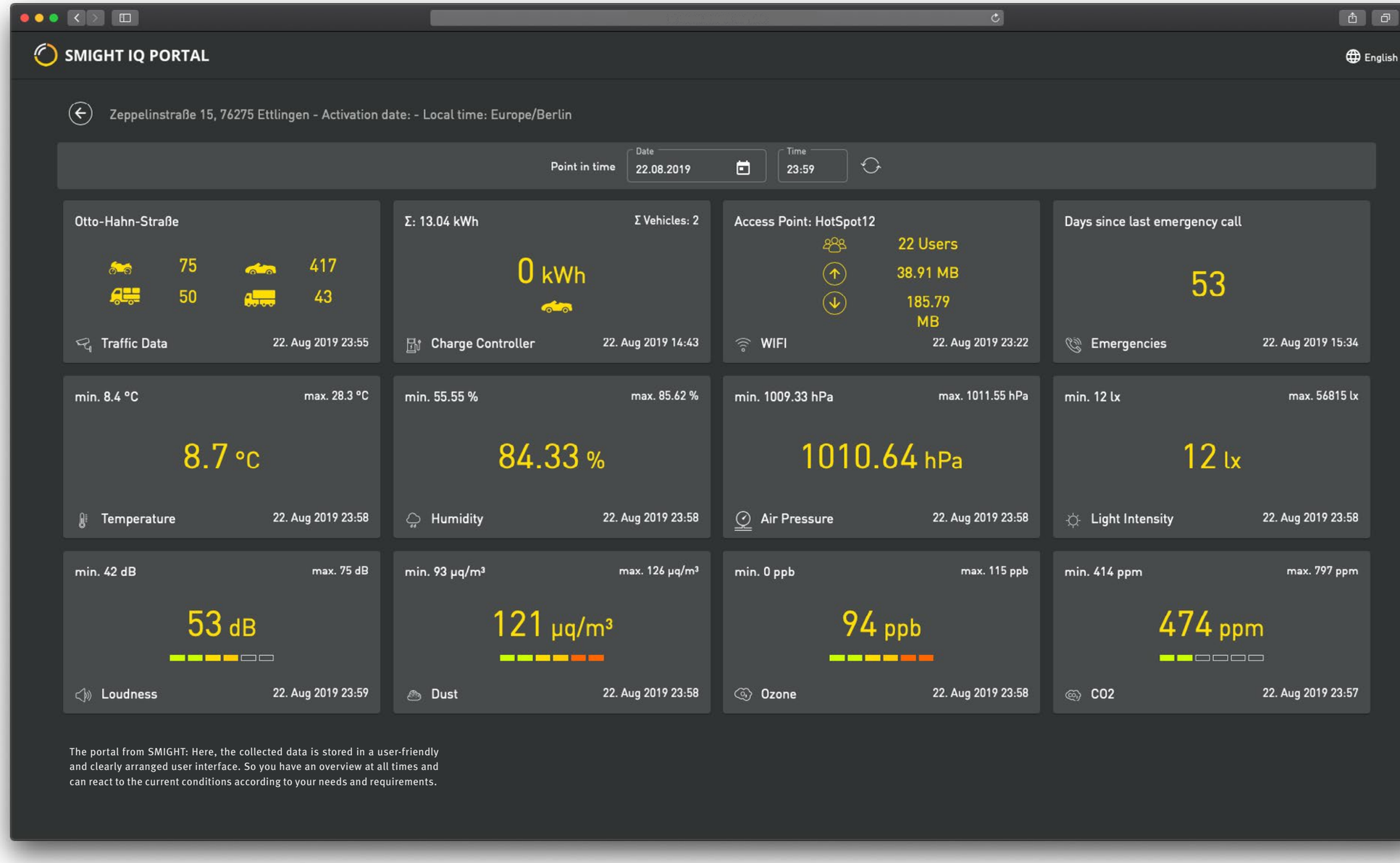
This is combined with the energy-efficient luminaires from Hess, which make an important contribution to protection of the environment and the climate and feature design that allows them to discreetly blend into the urban environment.

These luminaires also offer a wide variety of lighting perspectives and have innumerable innovative usage options that beautify the city and impart it with a leading-edge look. This combination represents the epitome of smart-city form and function. ■

SMIGHT
https://www.smight.com

Light, design and multifunction: Today's luminaire perfectly integrates additional smart features and functions for the requirements of a Smart City.

Fig. shows CITY ELEMENTS from Hess.



The portal from SMIGHT: Here, the collected data is stored in a user-friendly and clearly arranged user interface. So you have an overview at all times and can react to the current conditions according to your needs and requirements.

REFERENCE PROJECT

SMART CITY OF THE YEAR

NEWCASTLE:
Australia's harbour city, shines its way into the future

With its new smart lighting concept, as part of the Smart City strategy, Newcastle is considered to be a pioneering city in Australia. The new lighting is the largest, integrated, multifunctional luminaire installation anywhere »Down Under«.

The CITY ELEMENTS 230 were differently equipped to fulfil the respective requirements. With heights of up to 11 metres, the multifunctional illuminating columns have an impressive appearance.

CITY ELEMENTS
www.hess.eu/3400

The Australian city of Newcastle, located in the state of New South Wales and the country's eighth largest city with around 300,000 inhabitants, is characterised by an interesting contrast between the world's largest coal export harbour, with its huge cargo ships on the one hand and the distinctive art and culture scene with numerous galleries, colourful street art and graffiti on the other hand.

Newcastle also boasts the longest shifting sand dunes in the southern hemisphere and beautiful sand and surf beaches, including the 33km long Stockton Sand Dunes.

The idyllically situated city of Newcastle is popular thanks to its location and numerous attractions.

Newcastle's city centre boasts historic buildings, fascinating cultural institutions, vibrant shopping areas and markets and is a very attractive harbour city with a mix of top-class restaurants, restaurants with regional cuisine, cosy cafés and lively bars.

Smart City initiative with new lighting solution

In 2017, the city launched a Smart City initiative planned to be implemented over a four year period of time. This initiative had the aim of improving the quality of life, sustainability and economic diversity.

Part of this initiative is an intelligent and versatile public lighting system which, in addition to its functional and energy-saving nature, includes other smart systems such as public WLAN, cameras, loudspeakers, spotlight technology, illuminated decorative elements and sensors.

So far, this unique lighting concept, for the entire city centre, has been implemented using around 250 CITY ELEMENTS 230 from Hess. The illuminating columns are not only sophisticated in their minimalist and modern design, but also meet the different lighting requirements of the strict Australian-New Zealand standard.

Thanks to their modularity and pole diameter of 230mm, the integration of different intelligent functions is possible without any problems.

All these devices are perfectly integrated into the light column and do not impair the cityscape – on the contrary, they create a uniform appearance.

Intelligent multifunctional street lighting in Newcastle

Wharf Road, Hunter Street and Scott Street play an essential role in the new street lighting solution. While the 2km long Wharf Road runs alongside the Hunter River and to Nobbys Beach at the eastern end of Newcastle, Hunter Street branches off into Scott Street and Hunter Street.

Both streets lead through the city centre and end at the Tramway Reserve and at Pacific Park, respectively. Both parks have playgrounds, barbecue areas and host festivals, markets and concerts, inviting visitors to come and linger.

If you drive along Wharf Road, you can catch a glimpse of the Queens Wharf Ferry Terminal, the restaurants and the green areas. Furthermore, the Wharf Road is part of the "Newcastle 500", an annual motorsport event in which the racing teams compete in so-called "supercars".

The CITY ELEMENTS 230 from Hess were ready for action just in time for the first race ever in 2017 and the rush of visitors that the event attracted.

In addition to high-quality lighting, they also ensure public WLAN and, with integrated loudspeakers and cameras, provide information and security to visitors to the "race track". What's more, additional integrated headlights provide further lighting options. »

Packed with a variety of smart functionalities: Whether WLAN, cameras, loudspeakers, further spotlights or additional luminaire heads. Thanks to their modularity, the CITY ELEMENTS have hardly any limits.

Generous green spaces ensure relaxing moments.

The 50 Watt LEDs with a light colour of 4000K in the terminating elements, meet the lighting requirements on all three streets.

While variable luminaire heights of up to 10 metres were chosen for Scott Street and Wharf Road, the CITY ELEMENTS have a uniform height of 11 metres along the entire length of Hunter Street.

As previously mentioned, in addition to the standard lighting technology in the terminating elements, additional lighting technology is integrated in the intermediate elements.

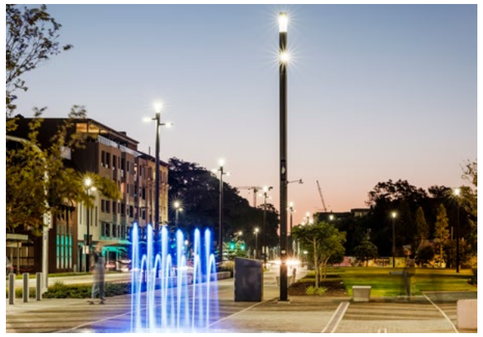
A further objective was to homogeneously illuminate the car park on Wharf Road from above, in order to provide a high sense of security.

The planners met this requirement with additional 27 Watt spotlights in some of the intermediate elements.

Staging of the »Market street lawn« event area

The former rail infrastructure, old covered pedestrian bridges and the exposed area on Wharf Road, which once separated the city centre from the harbour, have been transformed into an attractive 8,000m² public green area: Market Street Lawn. This is considered to be the junction of Market Street and Scott Street and thereby creates a connection between the Central Business District (CBD) and the harbour – a combination of North and South.

The green area not only invites visitors to relax and unwind with comfortable seating and playspace water feature, It also serves as a central event area for small to medium-sized events and activities.



In order to stage the area in the evening and night hours, the installation of GoBo projectors (integrated in the column) is planned. With these GoBo projectors, texts, graphics, brand logos and patterns can be displayed on the surface and impressively animated.

Two lanes for motor vehicles as well as two lanes for rail traffic and a landscaped centre divide in the middle of the road – the lighting requirements are immense.

The new light rail network – no problem thanks to multiple equipping of the CITY ELEMENTS 230

While the former rail infrastructure was transformed into the new Market Street Lawn, Hunter Street and Scott Street have become part of the new Light Rail network.

The lanes of the two roads are now separated by rail traffic – resulting in a very wide area that needs to be illuminated. The requirement to guarantee the necessary brightness on the road was therefore challenging.

Different versions of the illuminating columns were chosen for the lighting.

Firstly, the CITY ELEMENTS 230 along Hunter Street and Scott Street were fitted with an additional 80 watt DALVIK S luminaire head.

Secondly, a further offset luminaire head with 28 watts was installed on some of the CITY ELEMENTS 230 on the footpath that runs parallel to Scott Street.

The additional inclusion of DALVIK S luminaire heads makes it possible to significantly expand the lighting functions – and further increases the application range of the already extremely versatile CITY ELEMENTS.

And during the day, the illuminating columns, finished in the elegant colour "Mica Black", appear very reduced and reserved despite their stately heights.

Added value for the people in the city – thanks to multifunctional elements

In order to create real added value for citizens and visitors, multifunctional elements were integrated into all CITY ELEMENTS 230.

The comprehensive, public WLAN is integrated in an almost invisible way – only a small antenna in the terminating element discreetly indicates the presence of WLAN. »

Nearly invisible: The antenna for WLAN is perfectly integrated in the CITY ELEMENTS.

In a large part of the CITY ELEMENTS, the cameras integrated in the intermediate elements ensure greater security. This is particularly important at the previously mentioned major event, the "Newcastle 500" race, as well as at other events on Market Street Lawn.

Loudspeakers integrated into the luminaires along Wharf Road also ensure that spectators and guests can be informed and entertained during the events by means of announcements and music.

The 150 watt JBL column loudspeakers, installed in the basic elements, guarantee great sound thanks to their excellent quality.

In order to be prepared for more extensive multifunctional requirements, some illuminating columns are already equipped with the corresponding devices, which, among other things, enable the integration of a wide variety of sensors.

The decorative water elements are a very special highlight and ensure a very special atmosphere in the evening and night hours.

An optical highlight: the water decorative elements

Due to the prestigious location of Wharf Road in the city centre, a very special decorative element was chosen in addition to the lighting techniques and multifunctional elements described above: An illuminated 360° element that reflects a pattern of softly breaking waves.

In the evening and night hours, this element – which corresponding to the colour synonym of water – shines blue and embodies the character of Newcastle as a harbour city. An ideal challenge for the lighting specialist Hess.

Australia's largest smart lighting concept is set to further develop in the future

With the smart lighting concept as part of the Smart City strategy, Newcastle is considered to be a pioneering city in Australia, because the new lighting is the largest, integrated, multifunctional smart luminaire installation anywhere "Down Under".

This year, the city was chosen as "Smart City of the Year" at the national "Smart Cities 2019 Conference". Newcastle is thus following up on winning the "Smart Cities Strategy Award" in 2018.

Further smart luminaires are planned for the next few years in the centre of Newcastle. With additional multifunctional applications, the aim is to make the city even more efficient, for example in order to be able to analyse traffic by collecting data.

But one thing is already clear: The quality of life and inviting atmosphere will continue to be improved for residents and visitors thanks to the Smart City Initiative.

We thank our clients for their trust in Hess – as a worldwide partner for smart solutions. Today and in the future. ■

Photos: Robert Walsh 2019

REFERENCE PROJECT

ZELLA-MEHLIS (DE)

A »shining tuft of grass« that brings people together

Zella-Mehlis is a medium-sized town on the southern slope of the Thuringian Forest, which has been able to look upon its town hall square with pride since 2018. For it shines in new splendour.

After the renovation of the historical town hall in the years 1994 - 1995, the square in front of it was recently redesigned, a further step towards improving the townscape. Not only that: The town hall and its square are the hub of the town and are located exactly in the middle of the two parts of the town. Thus, in addition to its representative function, above all, the town hall has a connecting function.

It should not only be beautiful to look at but should also bring the citizens together, encourage them to linger and serve as an active meeting and communication location. The site is used year round for this purpose. It offers a variety or seating options and is an important venue for numerous events and markets. Understandably, the city planners commissioned to redesign the square, wanted to do justice to its significance and give it a special charm and atmosphere. Which, as everyone agrees, was most certainly achieved. There's a good reason for that: From the very beginning, the planners paid great attention to the lighting concept; something unique was to be used here to ensure the highest quality of experience possible for the central location – during the day and at night. The decision was made to use ARINI luminaires, which set extremely innovative impulses in design and function.

The new square offers a variety of utilisation possibilities – at different levels.

Aspects that quickly caught the designers' eyes and were implemented effectively: At the most effective point of the square, luminaires of three different heights were artfully arranged to form an imposing ensemble. This ensemble is reminiscent of a "tuft of grass" and also underlines the ecological orientation of the town. This is an important statement as Zella-Mehlis is a state-approved resort. »

The clearly organized, structured and very inviting square welcomes its guests and visitors.

The ARINI ensures an interesting interaction of light and shadows – and lends the square a very special atmosphere.

The “shining tuft of grass” in all its glory – with end caps in RGBW also sets an additional attractive accent.

In total, 7 ARINI poles each with three Light+ luminaire heads were used, which, thanks to their special design and flexible application possibilities, ensure an ideal illumination of the town hall square, the staircases and the limited traffic zone directly in front of the town hall with a minimum number of light points. In the process, glare limitation values were observed and it was ensured that the view of town hall from the town itself was not obstructed.

Everything contributing to an optimal result: Through the interaction of the 21 ARINI-Light+ luminaire heads with their RGBW end caps, the town hall illumination, the staircase lighting and tree illumination, DALI-controlled dimming and colour changes can be used to create variable lighting scenes that perfectly match the current mood of how the space is being used and optically reinforce it.

WLAN, cameras and other features can be easily retrofitted due to the multifunctional features of the ARINI concept and are available for future requirements.

The “tuft of grass” was positioned in an effective and attention-grabbing way.

The successful redesign of the town hall square is also supported, more than impressively, thanks to the luminaires and the lighting concept.

The high acceptance of the St. Nicholas market and the 2018 German championships in roller skis prove the great success of this design measure. The citizens of Zella-Mehlis love the new square, it has become the shining heart of their urban life. ■

ARINI
www.hess.eu/8182

The ARINI, completely coated in DB703, tie in perfectly with the colour scheme of the materials used on the square as well as with the façade of the town hall.

An attractive appearance: Classical façade meets modern lighting.

Product and design details:

- 4 ARINI G poles (curved), height 7000 mm
- 1 ARINI G pole, height 5200 mm
- 2 ARINI G poles, height 6000 mm
- 3 luminaire heads per pole, mounted on one side
- 21 ARINI Light+ luminaire heads, i.e. end cap with RGBW unit
- Control and dimming via DALI
- Optics: every 25 degrees, rotationally symmetrical
- Light colour: 3000 K
- Coating: DB703

Partner:
IGS Ingenieure GmbH Co. KG, Zella-Mehlis (DE)

FARO
www.hess.eu/2001

The FARO is an extraordinary luminaire – by day and at night The indirect lighting provides exceptionally homogeneous and virtually glare-free illumination in the evening and night hours.

MÖNCHENGLADBACH (DE)

An exclusive shopping experience in downtown Mönchengladbach

One of the most modern shopping centres on the Lower Rhine opened in 2015 in the North Rhine-Westphalian city of Mönchengladbach: the "Minto". Shoppers and visitors can look forward to some 100 shops and 20 restaurants and cafés spread across four levels and almost 42,000 square metres.

The Minto has much more to offer than just shopping. It was the first shopping centre in Germany to be awarded a 4-star label from the very beginning, signifying excellent quality in the customer experience offering a high level of service.

Free WLAN, charging stations for mobile devices, an electric car charging station, a baby lounge, various rest zones and trilingual capabilities at the reception are among the many amenities.

Interplay of modern architecture and lighting

Urban planning principles were important in the construction of the Minto. In addition to completing the pedestrian zone and creating a new city-centre "stepping stone" between "Alter Markt" and "Europaplatz", the focus was on integrating the shopping-centre architecture into the existing urban structure.

For example, the height of the building is similar to that of the urban surroundings, and, in its use of organic forms, the centre enters into a dialogue with the Hans Jonas Park opposite it. The soft curves of the vertical belted slats attached to the façade draw the attention of passers-by to the entrances of the building and enable terraces and roofed open spaces to be created.

They put the focus on the function of the façade as an interface between the building and the urban space. The warm colouring of the clay slats – fired in various reddish-brown colours – corresponds to the Rhenish pit-fired clinker brick used. The curved façade is broken up by glazed elements.

FARO luminaires ensure high quality – by day and at night

The high level of quality of the shopping centre is also underpinned by the exterior lighting. Thanks to their exclusive design, FARO luminaires from Hess create an impressive daytime effect and highlight the elegant look of the entire area.

The FARO luminaires underscore the high-end overall impression of the Minto shopping centre.

The FAROs, coated in "micaceous glaze" and with mounting heights of six metres, have a striking appearance in any case. The FAROs also round out the overall cityscape, since 120 FARO luminaires were previously installed along Hindenburgstrasse and in the surrounding area.

In the evening and night-time hours, the FARO luminaires provide a further highlight. The indirect lighting guarantees extremely homogeneous, pleasant and nearly glare-free light. The luminaire canopy of the FARO is equipped with 576 facets subjected to vapour deposition, creating a mirrored field.

This field of mirrors reflects the incident light onto the illuminated surface uniformly and in a targeted manner, creating the above-mentioned pleasant and homogeneous illumination of the surroundings. The perception of this atmosphere is additionally underscored by the warm white light colour (3000K).

The persuasive Minto concept

Located in the downtown area, the Minto entices visitors with a truly multifaceted and extraordinary shopping experience – and after closing time, it is possible to take a stroll in the adjacent pedestrian zone and the parks.

A new attraction and rendezvous point that appeals to more than just Mönchengladbach residents has been created. The catchment even extends beyond the German border, all the way into the neighbouring Netherlands. The success of the Minto concept can be impressively corroborated with a number: by summer 2018 more than 28 million visitors had already stopped in.

In addition, the Minto was honoured with the title of Germany's Most Beautiful Shopping Centre. We express our heartfelt congratulations on this accomplishment and are happy that our FARO luminaires support the upscale and coherent overall impression – by day and at night. ■

Photos: Andreas Horsky

MINISTER VISITS HESS

Dr. Nicole Hoffmeister-Kraut gathers information on smart city trends

The minister in dialogue about the Smart City of today and tomorrow.

Important visit at Hess. On Friday, 2 August 2019, the Minister of Baden-Württemberg for Economic Affairs, Labour and Housing Construction, Dr. Nicole Hoffmeister-Kraut, visited the luminaire and site furnishing manufacturer on site in Villingen-Schwenningen (DE).

Dr. Hoffmeister-Kraut in dialogue with Lord Mayor Jürgen Roth of Villingen-Schwenningen.

The minister was accompanied by a delegation which included Karl Rombach, a member of the state parliament, as well as the Lord Mayor Jürgen Roth and the Mayor Detlev Bührer (both of Villingen-Schwenningen).

The focus of interest was the infrastructure of a city: networked, intelligent, simply smart.

In this regard, Hess, a leading specialist for Smart City applications, can offer a wide variety of tried-and-tested as well as forward-looking solutions.

The luminaires can be equipped in a variety of ways: With WLAN, cameras for security-relevant areas, loudspeakers, GOBO projections, power and water supply, sensors of any kind or charging stations for e-mobility – everything is possible and can be perfectly integrated. Ideal for an attractive appearance, clearly structured surfaces and a smart environment within urban spaces.

Additional functions are also being introduced in the area of site furnishings. For example, benches with qi-charging stations that enable wireless charging of mobile devices and also offer a high level of protection from external influences.

Tobias Roos (right) gave an overview of the latest developments and future trends.

A bench with added value – qi-charging stations elegantly integrated into the wood. Perfect for supplying power to mobile devices.

In the future, intelligent rubbish bins will have an automatic fill level indicator to ensure that disposal routes are optimised and that the rubbish bins are only driven to when they really need to be emptied.

We would like to take this opportunity to thank you again for your visit! ■

The delegation, including Detlev Bührer (5th from left; mayor), Dr. Nicole Hoffmeister-Kraut (centre); Jürgen Roth (4th from right; Lord Mayor) and Karl Rombach (2nd from right; MdL [member of state parliament]), was received by Tobias Roos (2nd from left; Head of Product Management), Jürgen Duffner (6th from left; Sales Manager DACH) and Marco Walz (right; Head of Marketing/Communications and HR)

Videoclip, from Regio TV, about the Minister's visit:

Report about Hess from 1:57 to 2:38 min.
Source: Produced by Regio TV Bodensee, 2019

SCAN AND VIEW NOW
https://www.regio-tv.de/mediathek/video

Starting from the left: Mayor Detlev Bührer, Lord Mayor Jürgen Roth, Kai-Uwe Huonker, Ulrich Köngeter, Wolfgang Scharlawski (all three from the SVS) as well as Jürgen Duffner und Thorsten Kessler (both from Hess)

REPLACEMENT OF 13,400 LIGHT POINTS

Villingen-Schwenningen shines completely in LEDs

In September 2017, Villingen-Schwenningen (DE) launched a very special future-oriented project – linked to an ambitious goal: The replacement of approximately 13,400 light points (in the city area as well as in the associated districts) with LEDs within 2 years!

On 1 August 2019, the time had come. After just 22 months, the project was successfully completed – without any problems or delays.

Thus the city, with its 85,000 inhabitants, is playing a pioneering role in Germany. No other city of this size has been able to completely convert to LED in less than 2 years.

Strong partners on board – SVS and Hess

The city of Villingen-Schwenningen relied on two strong partners within the framework of the replacement work. On the one hand, the city relied on the Stadtwerke Villingen-Schwenningen (SVS) [public utility company], that has been testing LED lamps on its own premises for over 13 years and commissioned the first LED test track in Germany 9 years ago. Through this and with

The LED replacement has attracted a lot interest. Lord Mayor Roth in an interview with SWR [radio broadcasting service].

further projects throughout Germany, the SVS has acquired a large amount of expertise which has now been utilized in this large project.

On the other hand, the city relied on Hess GmbH Licht + Form, premium manufacturer of designed outdoor luminaires and site furnishings. Hess delivered all the luminaires required for the replacement with LEDs on schedule, or in technical jargon, “just-in-time”.

High energy savings

As a result of the replacement with LEDs, the electricity costs for street lighting are now just 300,000 euros a year, which amounts to a savings of around 70 %. The savings potential can

Kai-Uwe Huonker (SVS) gave his detailed opinion of the LED replacement.

be achieved in part due to the fact that not all luminaires now shine with the same intensity throughout the night.

“The luminaires dim automatically depending on the traffic situation. However the light points along the main roads shine with greater intensity than in residential streets” says Kai-Uwe

The FARO luminaires – very prominent luminaires in the cityscape. The existing luminaires were also retrofitted with LED.

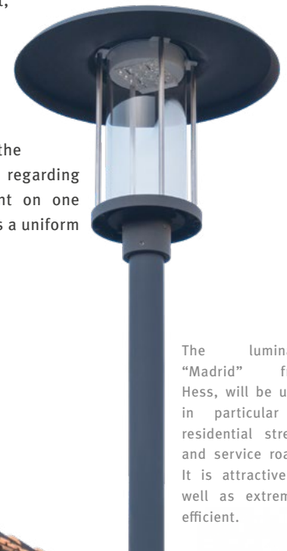
Huonker, SVS project developer. The lord mayor, Jürgen Roth, is pleased about the savings: “Thanks to the enormous savings, we now have 700,000 euros more at our disposal in the yearly

Lord Mayor Jürgen Roth thanked all those who participated in the project for the smooth and quick implementation – and is proud of what has been achieved.

budget than in the past. Money that we can sensibly invest in other projects. In addition, I would also like to emphasize the positive characteristics of LED lights, for example when it comes to ‘insect-friendliness’.”

Forward-thinking concept – Focus on 3 luminaire models

In the course of the LED conversion, the city is relying on a forward-looking concept. With the exception of the luminaires that characterise the cityscape, such as the FARO luminaire which is present in the city centre and sets accents during the day and at night thanks to its appearance and indirect light, only 3 luminaire models (chosen based on the requirements of the location at which they are installed) will be used in the future. As a result, the city reduces the complexity regarding maintenance and replacement on one hand and on the other ensures a uniform overall appearance. ■



The luminaire “Madrid” from Hess, will be used in particular in residential streets and service roads. It is attractive as well as extremely efficient.

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
www.griven.com

GRIVEN CATALOGUE

DOWNLOAD CATALOGUE-PDF
www.hess.eu/en/Service/Download/GRIVEN_KATALOG_2018_EN.pdf

QATAR (QA) – AL DAAYEN WEDDING HALL COMPLEX

A shiny wedding day

After the success of Al Rafaa Celebration Complex, Al Daayen Wedding Hall Complex has been recently lit up by GRIVEN with the help of a dynamic LED colour changing system delivering an unforgettable wedding experience.

Al Daayen Wedding Hall Complex provides young couples with a dedicated fully-furnished space equipped with all the needed facilities for a glorious wedding day at a very low charge.

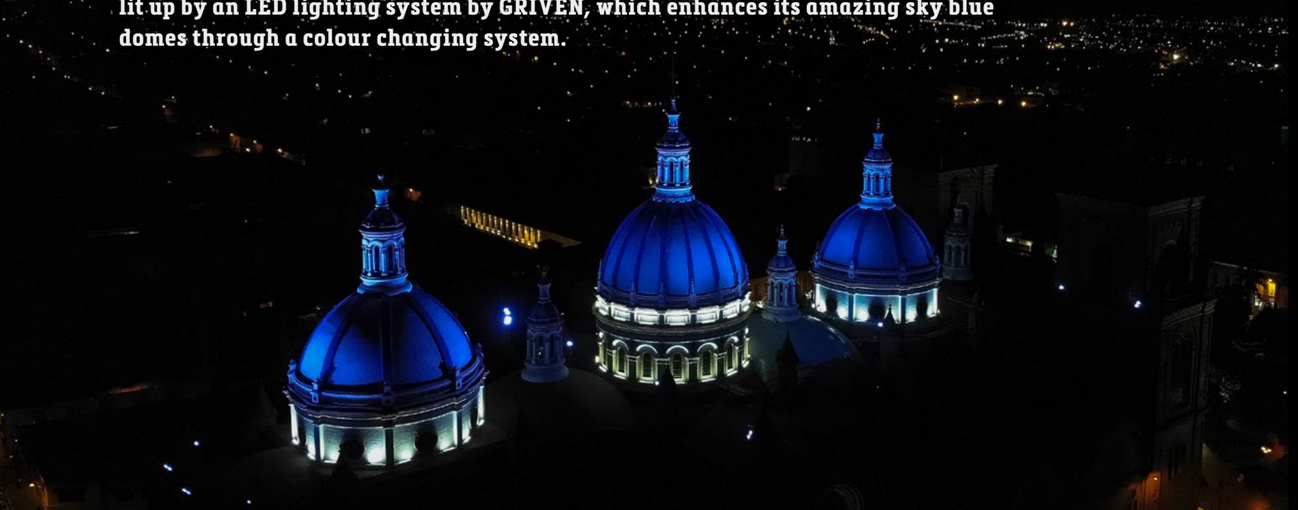
Its Arabic architecture, creating a romantic, unforgettable atmosphere, required an exterior illumination divided into fixed warm white lower parts and dynamic colour changing upper areas.

A total of 1850 LED lighting fixtures by GRIVEN deliver a jaw dropping effect to this complex with an alternation of bright intense shades enhanced by colour changing effects and warm white distribution. ■

CUENCA, ECUADOR (EC)

Blue vibes at the New Cathedral of Cuenca

A World Cultural Heritage Site, The Cathedral of the Immaculate Conception of Cuenca, known as the Cathedral of Cuenca or the New Cathedral, has been recently lit up by an LED lighting system by GRIVEN, which enhances its amazing sky blue domes through a colour changing system.



Nowadays the cathedral is the icon of Cuenca and its amazing sky blue domes, which stand out throughout the historic center with a height of almost 60 meters, characterize the skyline of the city in a unique manner.

Financed entirely by the Fundación Iluminar Luz y Color para Cuenca, a new lighting project for the domes of the cathedral started in October 2018 in conjunction with the relevant structural restoration works of the domes themselves.

The authorities of Cuenca required low energy consumption and environmentally friendly LED luminaires to light up in white and blue tones the imposing domes of the cathedral, with the possibility to switch to different colours according to the festive or religious occasions of the city.

An array of PARADE S in cold white and POWERSHINE MKW D and S in RGBW colour configuration were installed directly on the cathedral domes and spires in order to obtain the required fixed white light and dynamic colour changing illumination, respectively on drums and domes of the cathedral.

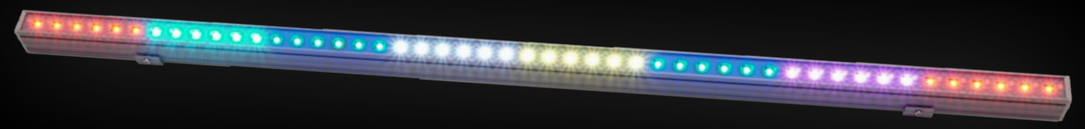
The night view on the city is now really amazing: the coloured domes are visible from far away and draw the attention with their architectural perfection and amazing allure even at night. ■

MULTIMEDIA PIXEL LIGHTING

Graph-i-Pix

NEW

Specific for advanced direct-view lighting solutions, Graph-i-Pix is a newly conceived ultra-slim, multi-pixel, LED linear module that enables an endless layout of patterns and graphics displays with an optimal pixel resolution.



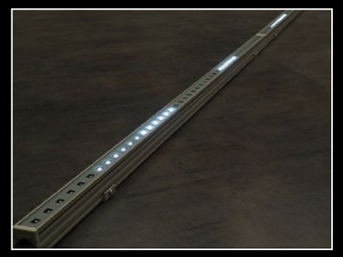
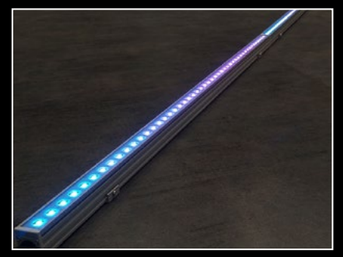
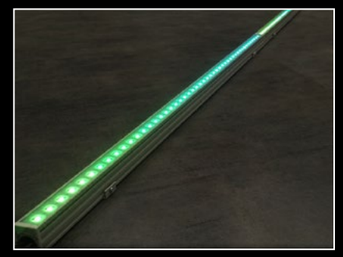
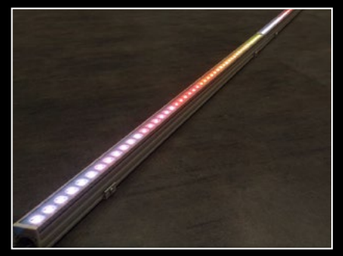
Fitted with 48 RGB LEDs, it features an independent 8-pixel configuration per metre, whereas each pixel is made up of 6 LEDs.

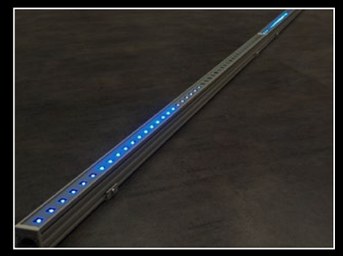
Capable of reproducing almost any graphic visual concept on large scale façades, more modules of Graph-i-Pix can comfortably be set up for a uniform visual pattern layout to achieve a dynamic and extraordinary brilliant performance.

Fitted with a tempered clear glass and fixing brackets, its ultra-compact, slender and lightweight chassis allows a comfortable installation in outdoor ambiances even with reduced mounting space.

Meeting a huge variety of lighting design prerequisites, Graph-i-Pix naturally supports lighting designers in the creation of strikingly appealing and stunning effects for living architecture solutions. ■

GRIVEN
www.griven.com

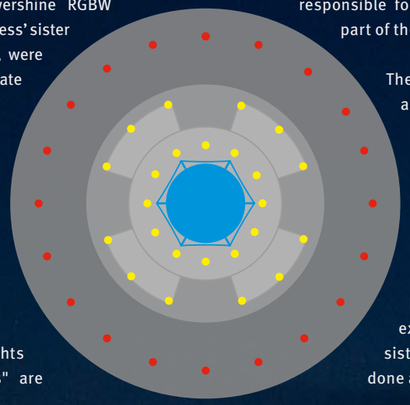


LIGHTING ASPECTS ALREADY PART OF THE DEVELOPMENT PLAN

Rottweil's »shining« landmark

The new test tower, from thyssenkrupp, in Rottweil (DE) quickly became Rottweil's imposing and innovative landmark – during the day and at night. Thanks to the sophisticated lighting concept from L-PLAN LIGHTING DESIGN, the tower represents a luminous architectural flagship for thyssenkrupp's innovation centre for elevator technology.

A total of 44 Powershine RGBW spotlights, from Hess' sister company GRIVEN, were used to illuminate the tower.



These are arranged in the form of two circles. 24 spotlights (●), equipped with "wide optics" form the inner circle which illuminates the lower part of the tower.

The remaining 20 spotlights (●) with "medium optics" are responsible for illuminating the upper part of the tower.

The selected spotlights and optics ensure that the illumination of the tower is as efficient, environmentally friendly and with as little scattered light as possible.

In this regard, the experts from Hess and its sister company GRIVEN have done a great job.

DETAILED REPORT ON THE TEST TOWER
www.hess.eu/turm

A total of 44 high-performance, Powershine RGBW spotlights (each with 281 W) perfectly stage the impressive structure.

Photo: © Hess

Photo: © thyssenkrupp Elevator

GRIVEN – ARCHITECTURAL LIGHTING

L-PLAN LIGHTING DESIGN is an independent lighting design consultancy based in Berlin. The consultancy was founded in 1998 by Michael Rohde.

L-PLAN stands for creative, high-quality and sustainable lighting design and for many years of project experience, in particular for artificial lighting and daylight planning, lighting master planning, luminaire development and event lighting as well as light installations.

L-PLAN works interdisciplinarily and brings together knowledge and expertise from the fields of architecture, interior design, product design and electrical engineering.

The company works nationally and internationally and designs lighting for museums, religious buildings, representative buildings, office and administration buildings, traffic structures, sales rooms, hotels and restaurants, media façades and outdoor spaces.

Further information on L-PLAN can be found at: www.l-plan.de

Additionally to an innovative lighting design, the lighting design consultancy L-PLAN LIGHTING DESIGN from Berlin also presented the basics for the lighting concept.

We talked to Mr. Gremer, one of the two managing directors of L-Plan, about the essential work that had to be done concerning the lighting well before the tower was constructed.

Mr. Germer, what were the first steps that you took in this project?

The lighting of the tower has a long history indeed. The requirements for façade lighting were already part of an environmental report drawn up in 2014, which was part of the justification for the development plan. For this purpose, we prepared a corresponding assessment in which important topics such as luminance, scattered light, insect-friendliness and on/off times, depending on the season, were addressed and evaluated.

What was particularly important to you?

In addition to the environmentally relevant topics, the prominent position of the tower and its unique architecture naturally played a decisive role. We regard "light" as an integral part of architecture. Therefore, it was important to enhance the unique architectural language of the tower and its prominent appearance with a distinctive lighting design.

What types of lighting were up for discussion?

We considered a great variety of possibilities, such as backlighting the façade, illuminating the tower core itself as well as illuminating the façade, i.e. the shell of the tower from the outside. The latter proved to be the best solution.

What was the decisive factor in this decision?

In the course of an on-site sampling, it became apparent that the sculptural quality and the spiral-like façade spiralling towards the sky can only be effectively staged by illuminating the shell from the outside, i.e. from the ground. The visual effect of the convex-concave silhouette would have gone lost when using another form of illumination. I think the result speaks for itself: An incredibly beautiful appearance at night – while adhering to the economic and ecological framework conditions. ■

The covering, made of glass fibre, drapes the tower in an elegant garment – by day and also at night, thanks to the elegant illumination.

Photo: © thyssenkrupp Elevator

NORDEON GROUP

Seven strong brands – one group

With its brands GRIVEN, Hess, Vulkan, LAMP, Schmitz | WILA, WILA and Nordeon, the Nordeon Group can meet all of its customer demands.

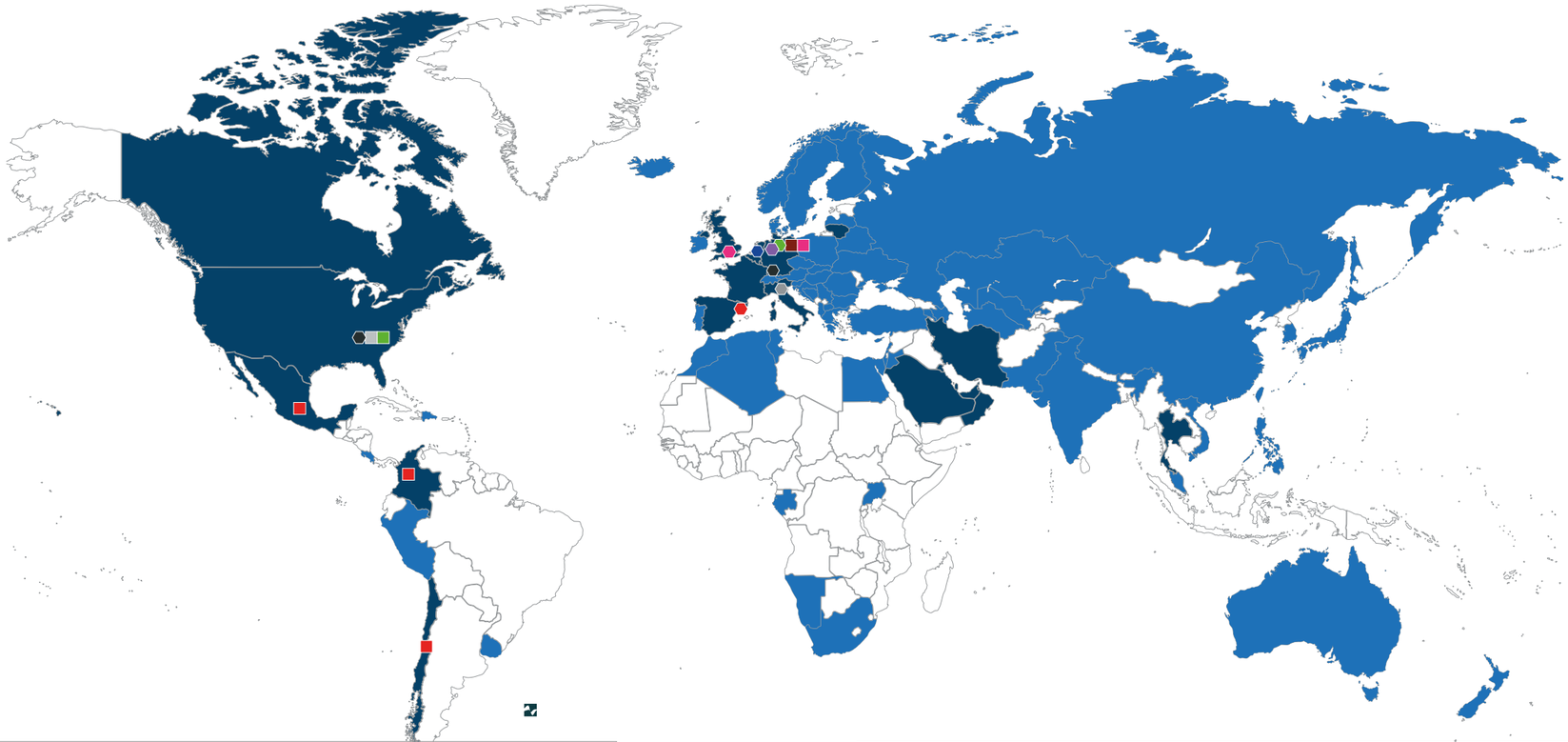
Whether for architectural lighting, indoor lighting or outdoor lighting; whether for industrial, commercial, or office / administration purposes, for the hotel industry, public spaces, buildings or close to buildings – the collective know-how regarding applications, technology, design, specifications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

NORDEON GROUP
www.nordeon-group.com

ARCHITECTURAL LIGHTING | OUT DOOR | INDOOR

GRIVEN world lighting challenge | .hess | Vulkan | LAMP Worktitude for light | SCHMITZ | WILA | WILA | NORDEON

www.griven.com | www.hess.eu | www.vulkan.eu | www.lamp.es | www.schmitz-wila.com | www.wila.com | www.nordeon.com



Headquarters | Production | Countries with own sales | Countries with sales partner

NORDEONGROUP | GRIVEN | .hess | Vulkan | LAMP | SCHMITZ | WILA | WILA | NORDEON

IMPRINT
Editor:
Hess GmbH Licht + Form
Lantwattenstr. 22
D-78050 Villingen-Schwenningen
www.hess.eu

Editing:
Marco Walz (V.i.S.d.P.)

Graphic / Layout:
Josua Huonker

Contact:
marco.walz@hess.eu
Tel.: +49 (0) 7721 920-475

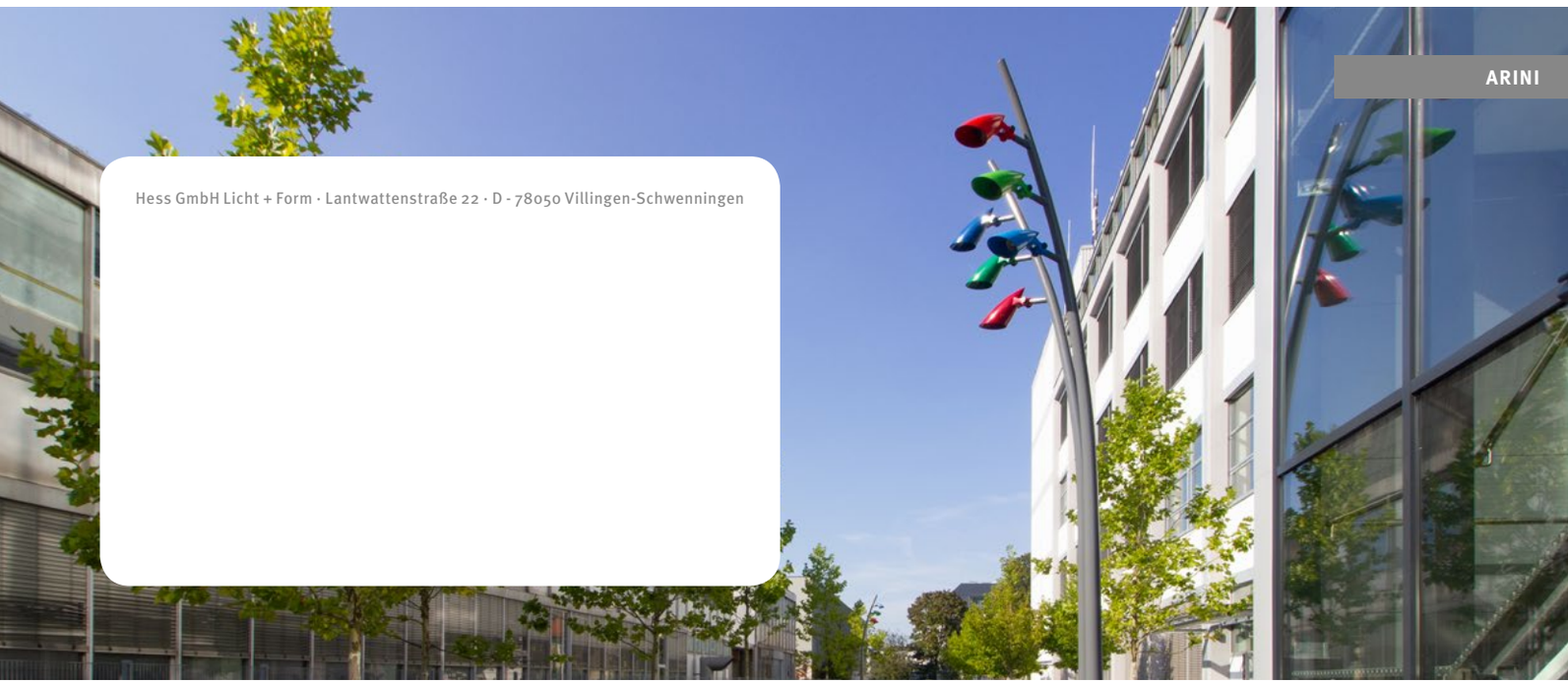
Appearance:
Three times a year

Print:
PRINTSTUDIO VS GmbH

SMART LIGHT, SMART MULTIFUNCTIONALITY AND SMART DESIGNS.

For the Smart City of today and tomorrow!

.hess



ARINI

Hess GmbH Licht + Form · Lantwattenstraße 22 · D - 78050 Villingen-Schwenningen

CITY ELEMENTS

RENO ELEMENTS