Connected to Life

News 2018

selux

Editorial

Using light to create a better quality of life is the goal towards which Selux continually develops its products and in 2018 too, we will again be launching some interesting innovations, which you will find on the pages that follow. In the current era of digitalization, products have to be more than just attractive, innovative and top quality. A distinct overall concept for interconnecting individual products and connecting them with the overwhelming possibilities of modern technology is essential, as is their placement in the context of the user or operator's environment.

At Selux, we term this approach "Connected to Life". This is a phrase that contains much of our DNA, for at Selux we have a strong tradition of viewing products from a customer perspective and offering comprehensive, effective solutions that go beyond mere products. Such as Smart Lighting by Selux, our contribution to smart cities – intelligent networking to improve quality of life. Such as urban lighting as an open, modular infrastructure. Products like the Lif light column, with its new, smart city elements, demonstrate how topics of this kind have long since become a reality at Selux – in Berlin for example, where visitors can experience how the latest smart technologies are being incorporated into lighting for themselves. Feel free to visit us any time for a demonstration!

Since being founded 70 years ago, Selux has been headquartered in the city of Berlin. Today, we continue to operate worldwide from this location, as well as from many other places around the globe, with a distinct specialization in exterior lighting applications. Whether you are a planner, customer, constructor or operator of lighting, we look forward to working with you on the smart city vision of integrating light ever more seamlessly into our environment, thereby improving the quality of life for human beings. We hope you will find some ideas to inspire you in the pages of this brochure.

Yours faithfully,
Jürgen Hess and Ralf P. Knorrenschild

New Product

Inula
p.26

Lif
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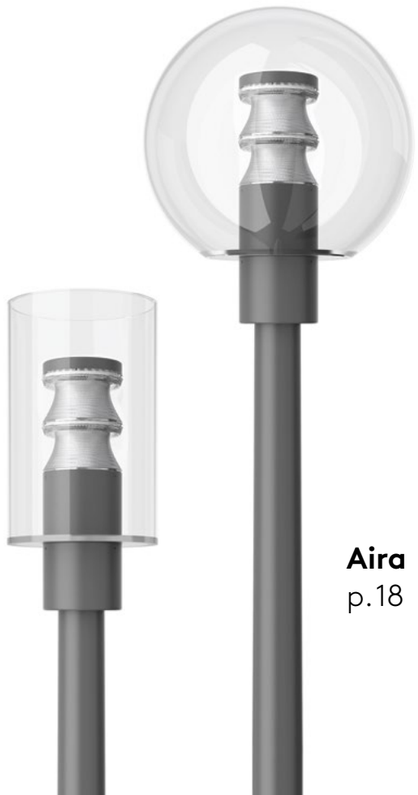

Aira
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Elo
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Connected to Life: Selux – makes cities smart

Rather than a vision of the future, the upgrade to networked cities is something that is already happening around us today. At the same time, throughout the world, big cities are growing. This increasing overcrowding is presenting people with huge challenges when it comes to communal living while, at the same time, digitalisation is providing new opportunities when it comes to organising the way we live our lives together and increasing the quality of life in cities. Light has long been an essential part of urban infrastructures – now Selux smart lighting is building new bridges to ensure the smart future of our cities.

„Our modular products provide ideal prerequisites for the integration of smart functions.“

Before we apply smart technology, we always have to ask how we can use this to improve our lives and make them more enjoyable, secure and interesting. Smart lighting by Selux follows the “Connected to Life” principle – rather than an end in itself, technology should be closely connected to life and the needs, expectations and potential of human beings. This is a strategy practised by Selux to make the smart city a goal worth striving for – a city with a sustainable quality of life for all. Urban lighting constitutes a sensible basis for this since it provides, even today, a huge number of installation points with a ready supply of electricity. Smart luminaires are therefore transformed into a node within an extensive digital network – a new role for lighting technology, and one for which Selux is optimally prepared. Our modular products provide ideal prerequisites for the integration of smart functions. Our many years of technical knowhow enable us to work with customers, users and other providers to develop solutions together that are perfectly tailored to individual requirements.

A smart city is more than just the sum of its parts as its constituent elements reinforce each other due to the synergies that occur. A smart luminaire by Selux, which is networked via the Internet, can be integrated into intelligent controls for needs-based switching and dimming. Or it can supply data via sensors, from brightness to traffic density or quality of air at one location. Or it can issue information into the environment via speakers, screens or WiFi hotspots. In this way the smart city interacts with its inhabitants and visitors, learning and gathering knowledge in order to be become better attuned to life within its enviements.

Feel free to ask us about this today. We would be delighted to be able to sit down with you to develop our visions and solutions for your own smart city project!

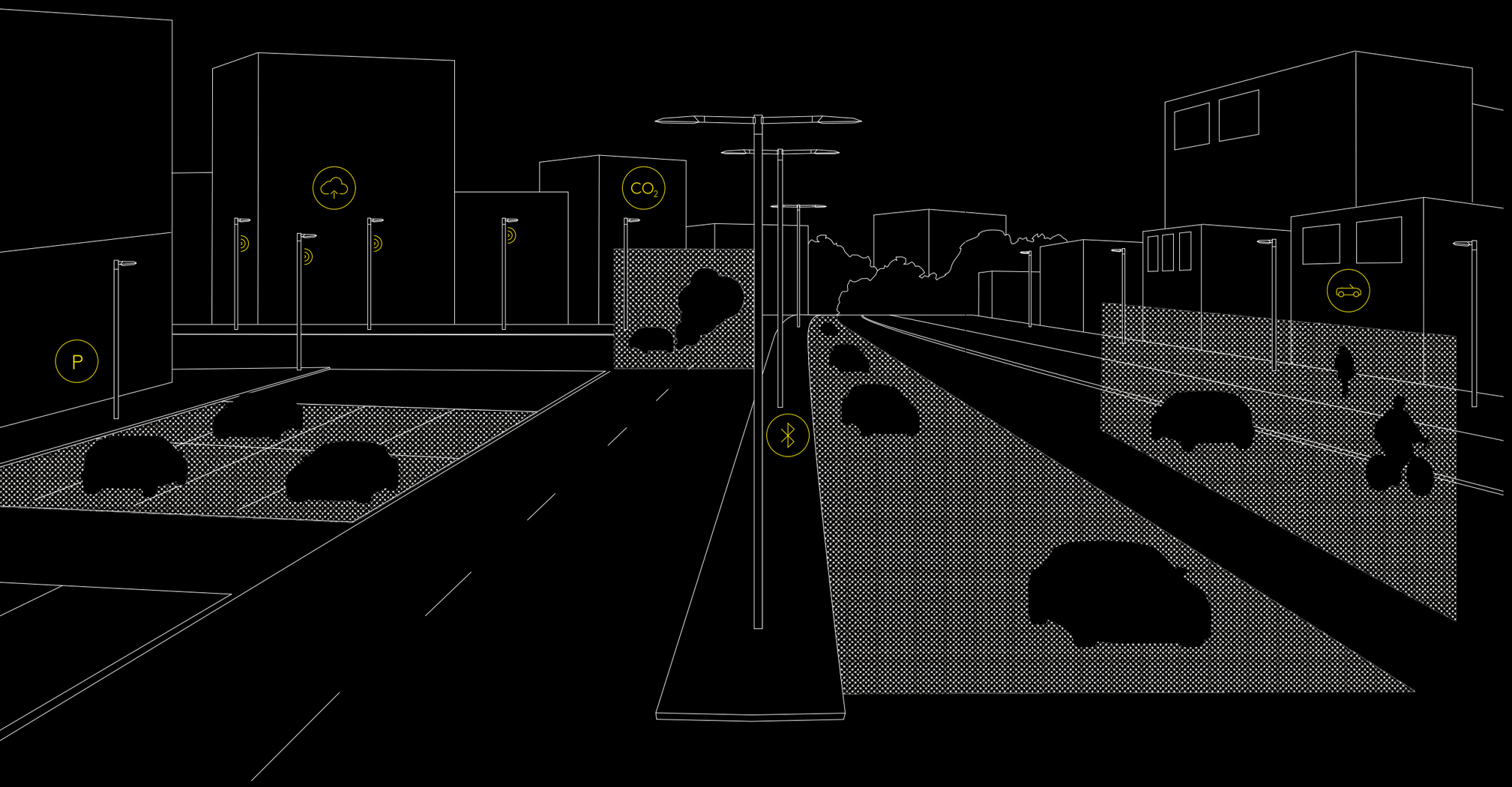
Integrated cameras
Cameras integrated within luminaires or poles enhance safety in public spaces. Combined with the appropriate software, image data can be captured and stored or evaluated in real time.

Loudspeakers
Luminaire columns can also perform audible tasks in public spaces due to integrated loudspeakers, enabling information or music to be played back over large areas. Data can be allocated individually to specific loudspeakers and certain luminaires equipped with emergency facilities.

WiFi
Use of integrated WiFi interfaces turns luminaires into hotspots. These enable simple internet access and straightforward use of digital services for both city inhabitants and visitors.

Marketing and tourism
Localised multimedia information can be displayed on mobile devices owned by residents and visitors to cities via broadcast interfaces on smart luminaires. Detection of visitor numbers and sojourn times enables marketing projects to be evaluated and controlled.

Sensors integrated into luminaires monitor their surroundings, collate data on this and transmit it in real time. This enables evaluations to be made and scenarios developed in order to regulate traffic flows or optimise logistics chains.



Networking + Cloud
Luminaires provide an ideal basis for the creation of digital networks in urban spaces and for processing information in real-time. Networked luminaires can also be controlled and regulated individually. Data is captured from the locality, relayed via the network and processed on a central server.

Parking space management
Available parking spaces are detected by ultrasound sensor systems in the luminaires making the anonymous monitoring of carpark zones possible without the use of cameras. This significantly reduces the length of time required to find a parking space and this data can also be used for traffic guidance systems.

Environment
Weather sensors gather data on temperature, rain, wind, air humidity or air pressure and relay this to networks via interfaces on the luminaires. Other sensors gauge the air quality and generate data such as particulate matter, ozone, nitrogen oxide (NO_X), sulphur oxide (SO_2) or carbon dioxide (CO_2).

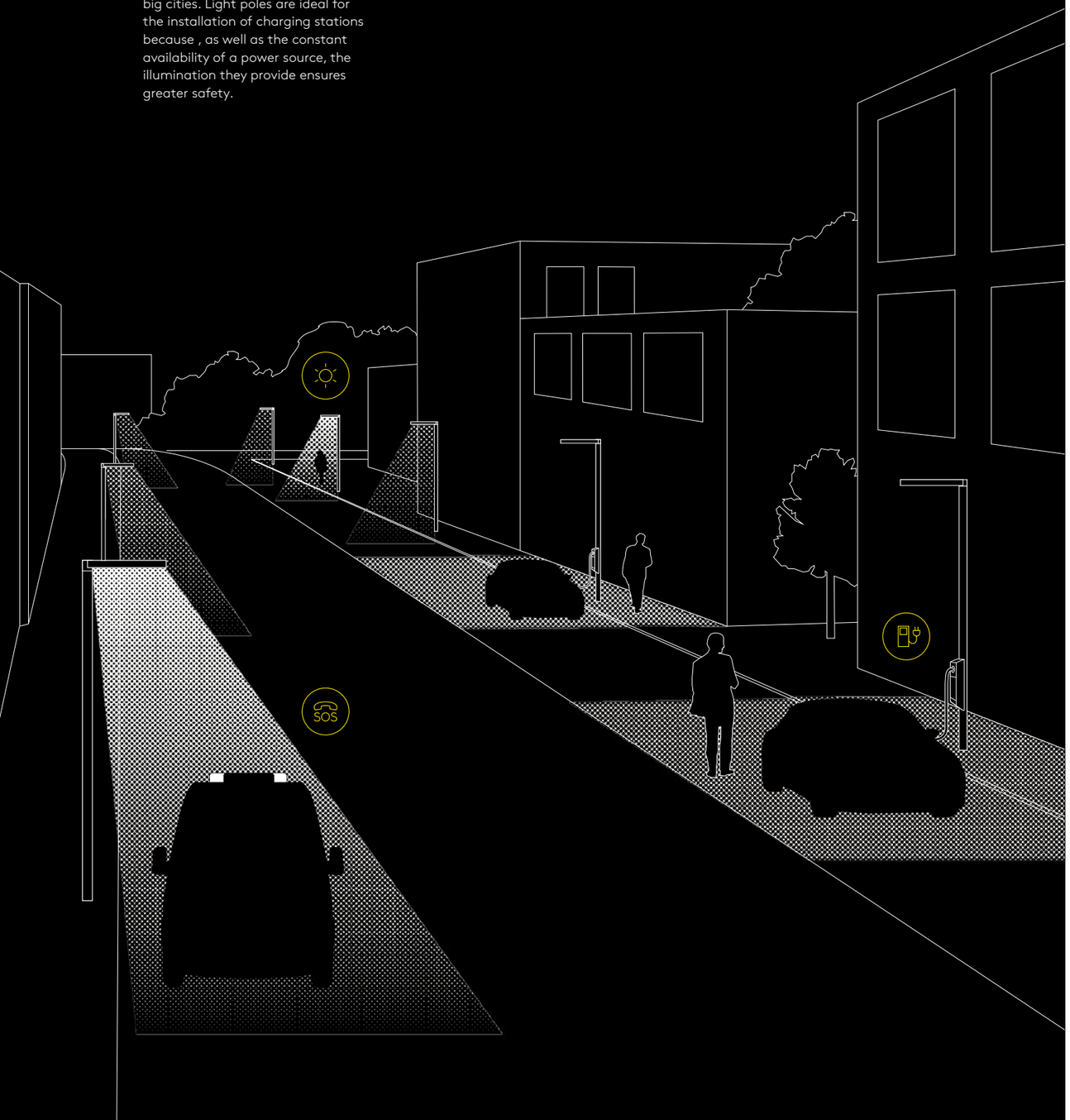
Traffic flow count (via Bluetooth)
Based on the quantity and movement of Bluetooth devices in the vicinity of the measuring points , feedback can be obtained on how fast road users are travelling and in which direction. Is the traffic flowing freely or are there traffic jams?

Traffic counts (via ultrasound)
Ultrasonic sensors can be used to count the number of road users heading in a certain direction.

Emergencies
Beacon technology enables lighting levels to be switched to 100% as soon as relevantly equipped, registered emergency services are within range of a beacon.

Adaptive light
Light interacts with people and the environment for example; depending on the weather, time of day or traffic frequency. Regulated light that is needs-based fosters responsible use of resources – thereby increasing energy efficiency and reducing light pollution. Data collected from needs-based use can inform future planning.

E-mobility
E-mobility is one of the most significant future topics, especially in big cities. Light poles are ideal for the installation of charging stations because , as well as the constant availability of a power source, the illumination they provide ensures greater safety.



Products

Lif – the new urban light

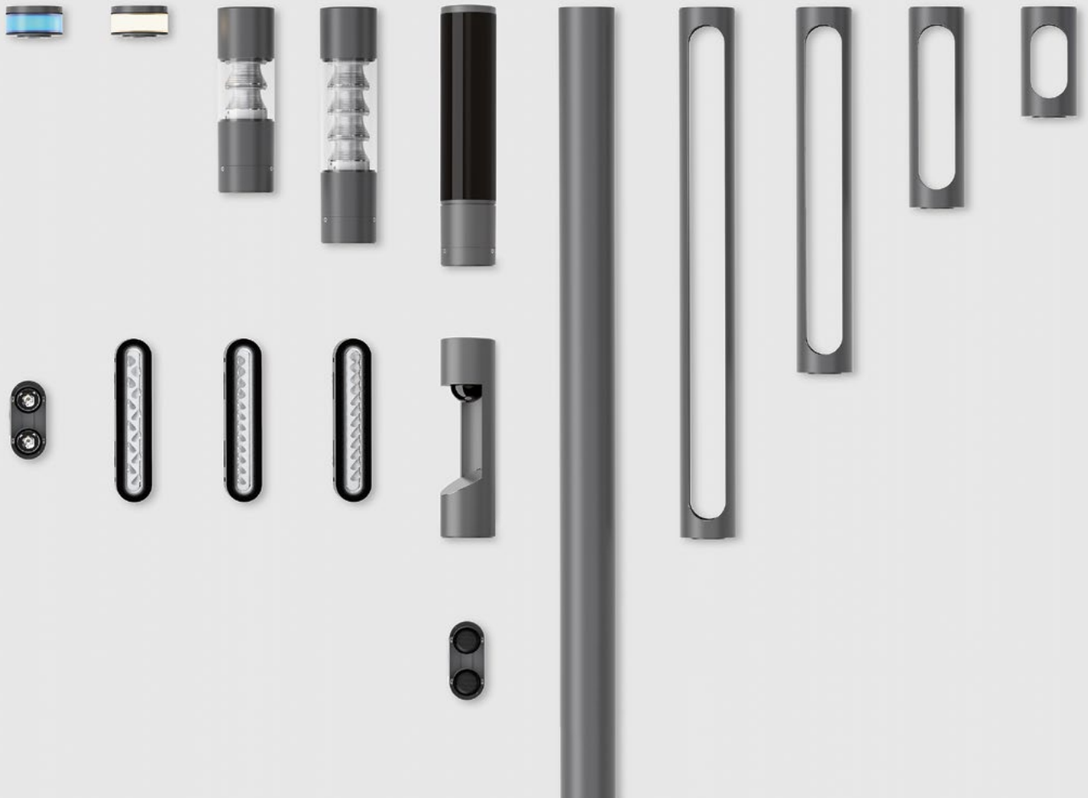
By day the new Lif is reserved, a slim cylindrical column in the cityscape. As darkness falls however, the modular system luminaire unveils its true potential, lighting up squares and pathways, setting facades in scene and emphasising objects. With smart modules, it can be transformed into a key element for intelligent cities.

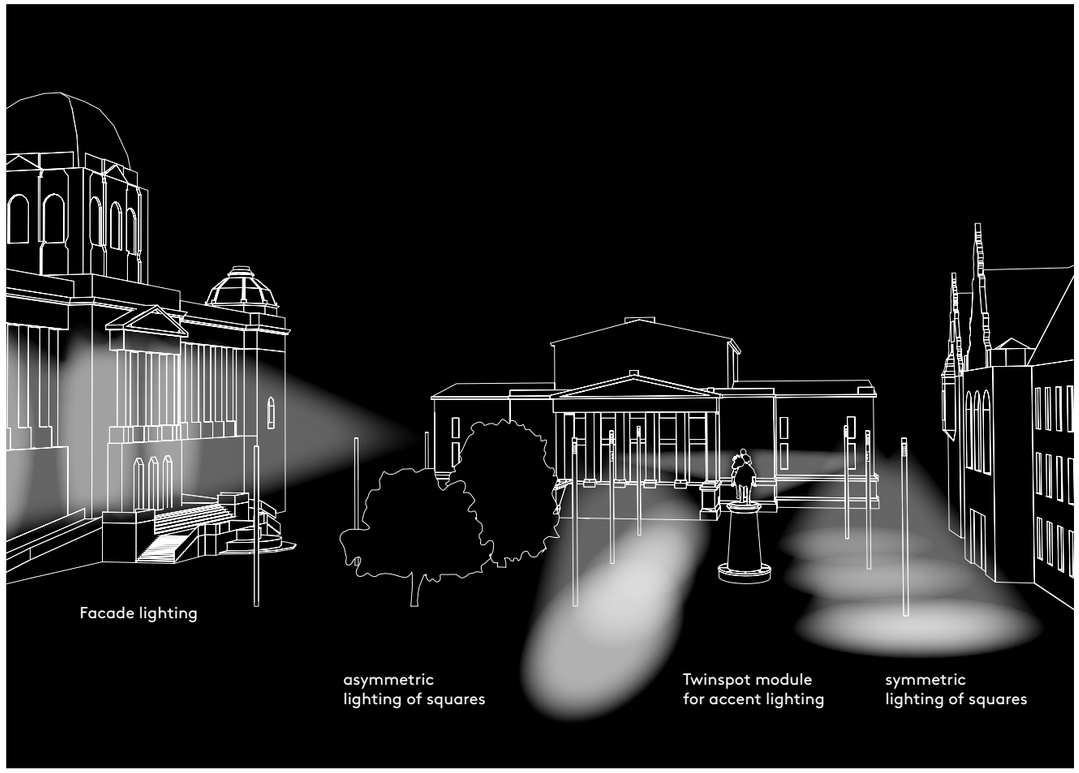
Modularity makes the Lif a genuine all-round talent

Due to its modular structure, the Lif enables maximum design freedom when it comes to use of light in urban spaces. More flexible than any luminaire before it, it can be easily adapted to various urban lighting tasks. Its versatile range of application options enable environments to be experienced so they become more inspiring than ever.

By day the Lif is discreet - a slim, cylindrical column with a diameter of just 180 millimetres that can be used in all areas of the cityscape as a space-defining element. Its elegant-purist design is capable of providing premium quality accent lighting in various environments.

When darkness starts to fall and big cities unveil their magic to the full, the Lif is transformed too. As a modular system, various gear trays can be added to it, making it suitable for squares or pathways, façades, as an accent light or even all of these together while





remaining a minimalist column. Lif therefore contributes to a clearly structured urban environment while offering planners plenty of scope for the creation of quality urban spaces in which to spend time and experience the city.

As a genuine all-round solution for exterior spaces the Lif proves its full worth with the addition of smart functions that go beyond lighting tasks and turn the light column into a key element of the smart city. In this way it can be equipped with speakers, used as a Wifi hotspot or as an electro-mobility charging station, for cameras or various sensors. As well as serving a decorative function, its ring-shaped accent element with RGB LED technology can also adapt to a signalling function when required via programmable coloured accents.

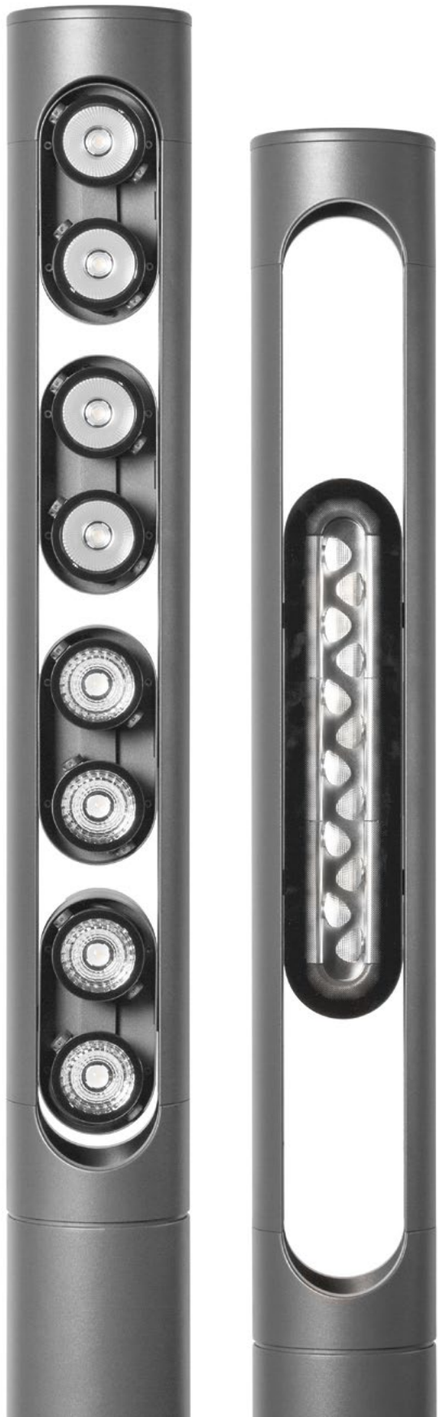
“The Lif enables planners to respond flexibly to changes in requirements. This is made possible by its modular design.”

Roman Liebe, product manager

All this makes the Lif an ideal complement for the city of tomorrow - a future-compatible, adaptable light system for urban areas. Its modular structure also enables simple upgrading where required. The multi-functional light column superbly combines security of planning and reliability of investment. The choice of materials also emphasises its claim to durability – a coated aluminium extruded profile is used for the main column while module terminations consists of premium quality, pressure die-cast aluminium.

Light modules for the Lif. Bringing urban spaces to life.

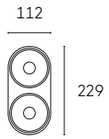
Lif can be deployed as a luminaire for squares or pathways, as a façade luminaire, an accent light or even all these in a single system – it's up to you. Lif light modules, mounting/pole basic elements can be combined in numerous ways to enable stylish customised solutions.



Twinspot module

spot semi spot medium

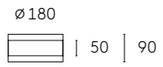
for use in a Lif mounting element · for spotlightiing of objects · 3000/4000 K · up to 97 lm/W · CRI ≥ 80 · DALI dimmable · ±60° rotatable and ±45° pivotable · die-cast aluminium housing with safety glass · Selux Graphite or special finish



IP65

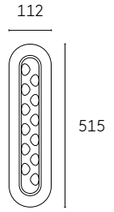
Accent element

self-contained element for ambient lighting · light source LED RGB, max. 7 W · DALI conrolled · converter is placed in the pole (2nd door necessary) · die-cast aluminium housing with PC cover opal · Selux Graphite or special finish



IP65

Facade module

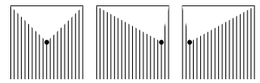


Light distribution vertical

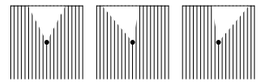
parallel concentrated · medium upward offset · flood upward offset

downwards near · directed downwards

Light distribution horizontal



symm. wide · asymm. wide left · asymm. wide right



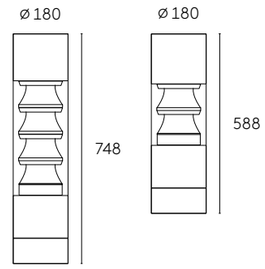
symm. narrow · asymm. narrow left · asymm. narrow right

for use in a Lif mounting element · for illumination of facades or vertical structures · 3000/4000 K · up to 80 lm/W · CRI ≥ 80 · DALI controlled · die-cast aluminium housing with safety glass · Selux Graphite or special finish

IP65

Top element

With quadruple Tritec Optic · With double Tritec Optic



symm. · asymm.

for the illumination of paths and squares · 3000/4000 K · up to 120 lm/W · CRI ≥ 80 · DALI controlled · die-cast aluminium housing with clear PMMA cylinder · Selux Graphite or special finish

IP65

Smart modules for the Lif. Even greater flexibility for the light column.

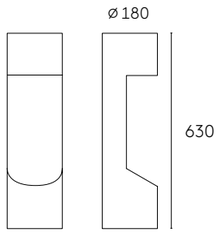
The functional modules for the Lif blend harmoniously into the modular system. Smart functions combined with the basic lighting function enable the Lif to become a key element in consistently designed, networked smart cities.

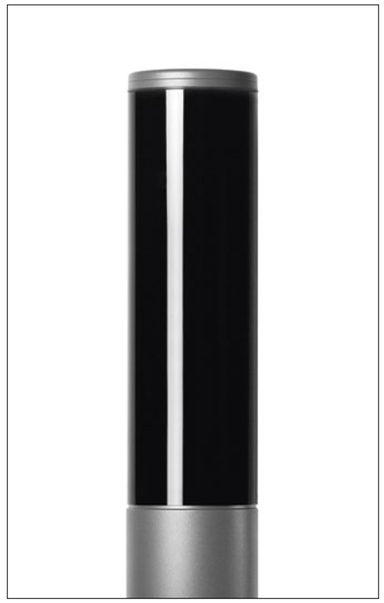
Besides smart elements, a wide range of sensors can be integrated into the Lif. Ask us about a personalised solution today.

Camera housing element

for receiving dome cameras up to Ø 150 mm · adapter plates for selected cameras of Axis, Bosch and Eneo available, other models/manufacturers on request · freely rotatable between 360° · galvanized steel housing · Selux Graphite or special finish

CE

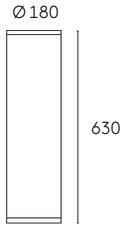




WiFi housing element

for the reception of on-site WiFi antennas/access point, on-site router is placed in the mast (2nd door necessary) · easy maintenance · aluminum body with black PMMA cover · Selux Graphite or special finish

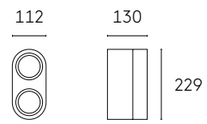
IP65 CE



Loudspeaker module

for use in a Lif mounting element · two saltwater resistant full-range 8 Ohm loudspeaker · die-cast aluminium housing · Selux Graphite or special finish

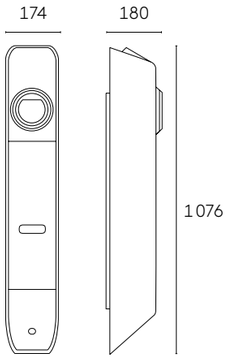
IP65



Pole charging station

for mounting on Lif or Selux standard poles · user guidance via functional LED ring · charging power 3,7/11/22 kW · IP54 · housing made of aluminium, anodized, injection molded polyurethane · white aluminum/anthracite

IP54 IK10 CE



Aira

Light in its purest form

In reality, built-up urban landscapes often constitute a clash of opposites where sturdy, solid elements collide with random chaotic shapes. Ideally the design of a luminaire should lead to space being created in such environments, providing clarity and relief.

The new Aira can be integrated into various heterogeneous environments yet at the same time its presence creates a certain aura. The shape of this pole-top luminaire with Tritec module is extremely reduced in size. What was the secret behind achieving a synthesis of this kind? We thought the best people to ask were designer Christina Miliopoulou and project manager Stephan Schubert.

It was the legendary designer Dieter Rams who devised the theory that good design actually involves as little design as possible. Would it be correct to think of the Aira in this way?
Miliopoulou: Indeed. When it comes to design, less is often more. The goal of minimalist design is, for me, simplicity. I want to make the product more accessible in terms of its usage and its impact.

What briefing did you receive as a designer when it came to the Aira?
Schubert: The Tritec module had been developed with the requirement of it being used in the Lif top element and as an upgrade kit for existing luminaires. At the same time, there was the idea of creating a completely new pole-top luminaire in order to provide a suitable setting for the Tritec module. The result was the Aira, the first major design project at Selux for Christina Miliopoulou, for which she was granted lots of freedom.

Miliopoulou: The goal of the Aira was to achieve a design that is both timeless and contemporary. The Tritec module was to fuse with its surrounding sleeve to form a single unit. Our aim was to combine technology with a certain ease and technology with simplicity. Using a cylinder and sphere as a moulded body, we created a variance of shape using the luminaire's most transparent, lightest part.

> "Radio waves can pass through its transparent moulded body. This will enable us to invisibly integrate smart functions into the Tritec module in future."

Stephan Schubert and Christina Miliopoulou

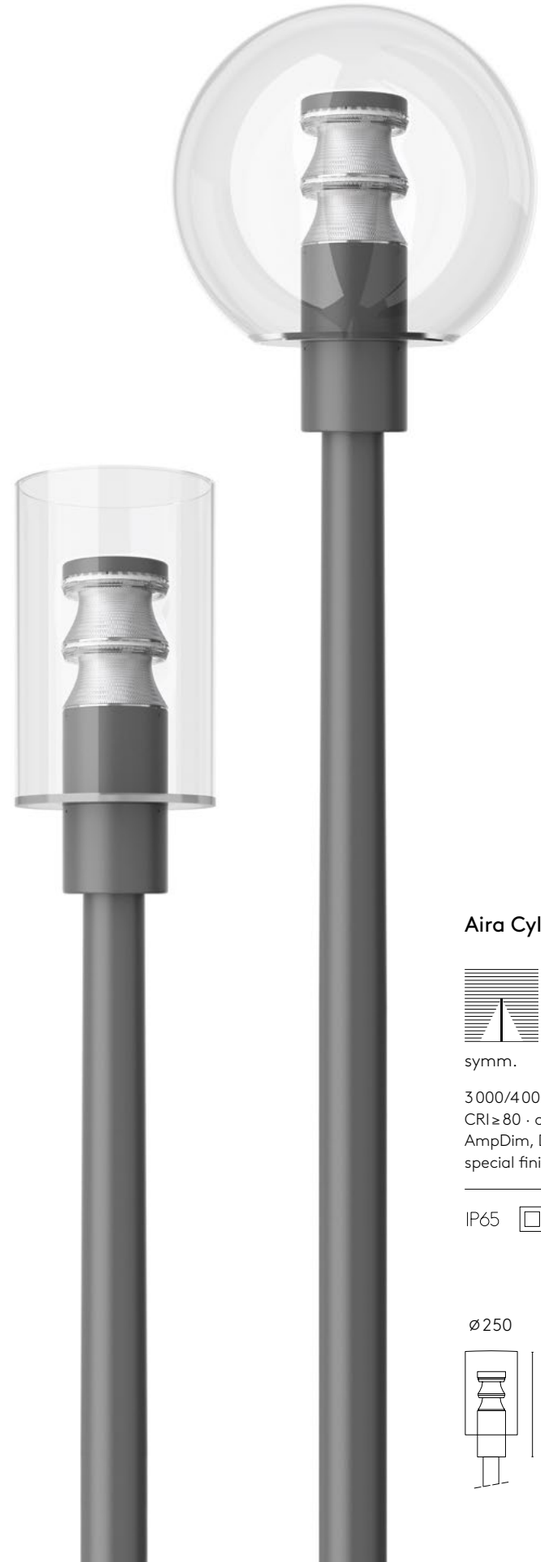
Design sketches

What problems did you have to overcome along the way in order to arrive at the finished product?
Schubert: One of the greatest challenges was designing a discreet interface so the luminaire could be opened. Our LED modules are virtually maintenance-free yet many calls for tenders still include this as a requirement. But Robert Rüger, our designer, came up with a creative solution for this too.

Miliopoulou: Indeed. The detachable connection is invisible from a pole height of four metres. The whole development team took on the idea of complete transparency – this was the only way to achieve the luminaire's light, hovering effect. Now, when we test out the Aira in urban or natural environments, we're impressed every time at the way it creates space within its environment and how it also interacts with the surroundings via reflections on the Tritec module or on its moulded body.

Just how tough is Aira during everyday use?
Schubert: That's what's special about it. The Aira looks delicate, immaterial almost. But thanks to its material – impact-resistant PMMA – it is highly robust and weather-proof. Aira complies with all the usual industry requirements with regard to use in residential areas, on side streets, in traffic-calmed areas or parks etc.

Does the Aira have any other innovative details that are not immediately obvious?
Schubert: Well, radio waves can pass through its transparent moulded body. This will enable us to invisibly integrate smart functions into the Tritec module in future without the radio waves being obstructed. So as well as minimalist design it's also a smart design – which makes the Aira incredibly unique and future-reliable.

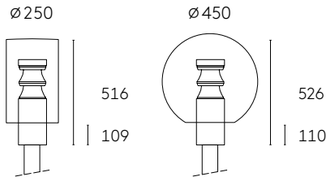


Aira Cylinder and Sphere

symm. asymm.

3 000/4 000 K · up to 123 lm/W · CRI ≥ 80 · controls: HNS, Dyn, AmpDim, DALI · Selux Graphite or special finish

IP65



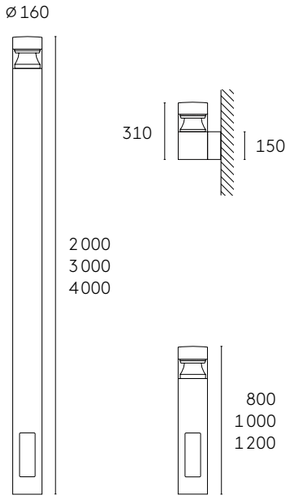
Elo –
pure light for building landscapes

Whether as a bollard, a wall luminaire or a light column, Elo provides balanced light in applications close to buildings. An elegant signpost for safety and orientation – with the innovative Tritec module.

Whether as a bollard, a wall luminaire or a light column, Elo provides balanced light in applications close to buildings. An elegant signpost for safety and orientation – with the innovative Tritec module.

The reserved design language of the Elo allows its lighting technology to speak for itself; a transparent, cylindrical moulded body made of polycarbonate (PC) enshrouds the Tritec module in a distinctive design. Its combination of prism ring lens and hexagonally structured reflector cone offers maximum anti-glare but at the same time leaves a remarkable impression. Its light quality too is equally convincing. The Tritec modules generate a balanced, gently tapered light distribution, either 360 degree or forward beaming.

The Elo family comprises bollard luminaires and light columns of various heights and light distributions as well as an asymmetrically beaming wall-mounted luminaire. Thanks to its reduced design, the system is able to blend into various architectural contexts and styles. Maximum compatibility: Elo can be combined effectively with the Lif which is also a cylindrical system luminaire, as well as many other Selux models. Thanks to the DALI interface, it can be seamlessly connected with intelligent controls and smart scenarios.



Elo Wall

asymm.

3 000/4 000 K · up to 107 lm/W · CRI ≥ 80 · controls: HNS, Dyn, AmpDim, DALI · Selux Graphite or special finish

IP65

Elo Light Column

symm. asymm.

3 000/4 000 K · up to 113 lm/W · CRI ≥ 80 · controls: HNS, Dyn, AmpDim, DALI · Selux Graphite or special finish

IP65

Elo Bollard

symm. asymm.

3 000/4 000 K · up to 107 lm/W · CRI ≥ 80 · controls: HNS, Dyn, AmpDim, DALI · Selux Graphite or special finish

IP65

Inula – designing the night

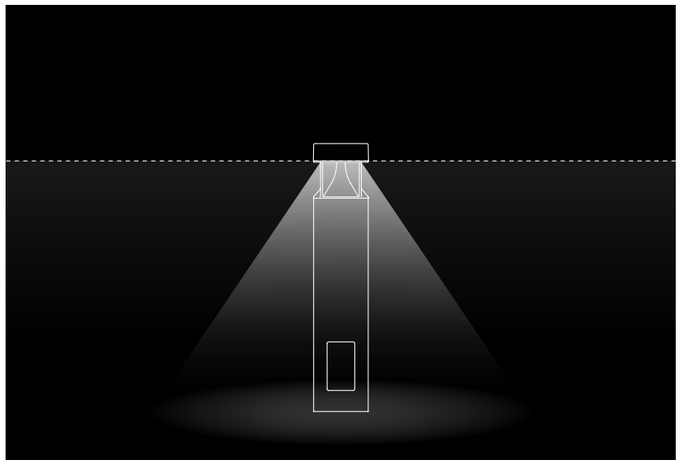
Rather than more light, public spaces around buildings, in parks or at other sites often just need better light precision. With an exterior that is extremely reduced in size, Inula bollard luminaires offer targeted lighting that is both pleasant and effective, without any glare, light scatter or pollution.

Dark Sky: Light only where it’s needed

During darkness, public spaces develop a character all of their own. Selux uses light to design the night in order to ensure safety and a high level of transmit quality for pedestrians in urban environments. Too much or the wrong type of light can conflict with dark sky objectives as well as destroying the atmosphere of a location: a pitch black night sky full of stars, as humans, plants and animals have experienced it since time immemorial.

The Inula bollard is equipped with special lighting technology that provides controlled ground level illumination making it highly deserving of the Dark Sky epithet – something also officially recognised by the International Dark Sky Association. In design concepts for public spaces, Inula’s presence as a bollard delimits spaces while also offering a range of precision lighting options.

Inula’s matt black light exit area, which is divided up into quadrants, is also discrete and glare free when activated. Looking directly into its LED light sources is prevented. The floor-level area around the bollard is illuminated all the more efficiently with different light distributions that can be adapted perfectly to the relevant requirements. For this reason Inula is available with several different patterns of active light quadrants: forward 90°, asymmetrical 180° and symmetrical 360° beaming. Common to all these light distributions is the uniform design of its planar lighting and soft transitions.



To be awarded the “Dark Sky” epithet, luminaires must not radiate any direct light proportions an implied horizontal plane – as is the case with the Inula.

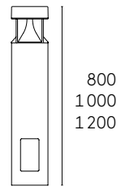
Inula Bollard

symm. 360° · asymm. 180° · forward 90°

3 000/4 000 K · approved by Dark Sky Association (IDA) · up to 77 lm/W · CRI ≥ 80 · controls: HNS, Dyn, AmpDim, DALI · Selux Graphite or special finish

IP65

Ø 200



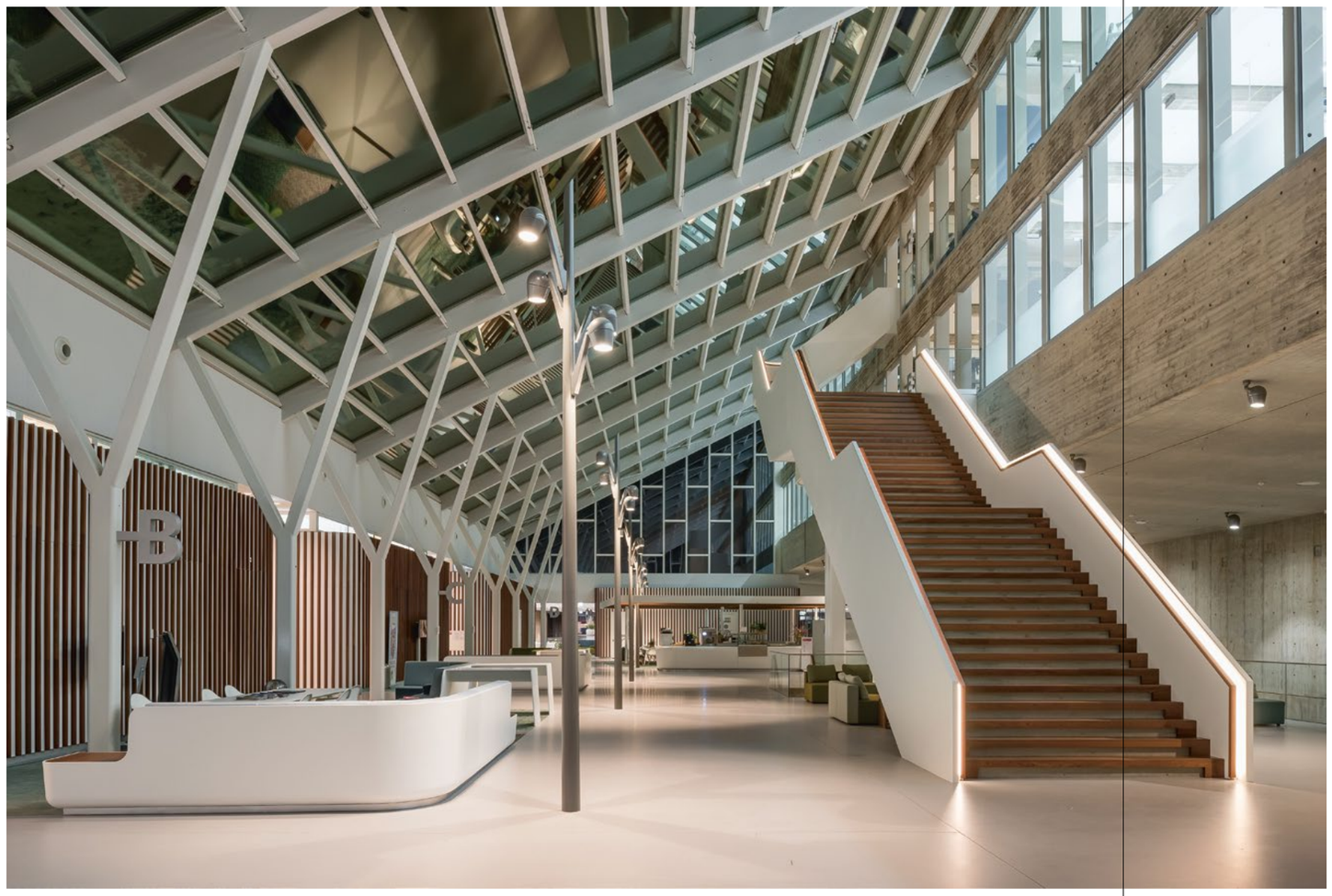
800
1 000
1 200

Projects

Lightstacks for Hamburg's new harbour promenade

The succinct architecture of this new harbour promenade has been designed by the office of Zaha Hadid. When darkness falls, it is roused to life by light – with targeted rays of light emphasising the staircases, the look of which is inspired by washouts in the sand. The inclined LED lightstacks that discretely illuminate the upper part of the harbour promenade, also conjure up maritime associations.

Architecture:
Zaha Hadid Architects; Studio H2K
Lighting design: Schlotfeld Licht
Product: custom lightstack
Photography: Martin Zitzlaff



Dental clinic at Radboud University, Nijmegen

With their floral design, Olivio system luminaires have bought nature into the foyer of this dental clinic. The delicate Olivio luminaire heads, designed by the landscape architects West 8 from Rotterdam, harmonise superbly with the surrounding landscape – allowing the prestigious atrium to 'bud' in a new light.

Architecture: Inbo
Lighting Design: Deerns
Products: Olivio Sistema and Universal
Photography: Jan de Vries

Place du Peuple, Saint-Étienne, France

Whereas in the past Saint-Étienne was a wealthy industrial town, today the city in the Rhône-Alpes region is geared more towards culture and tourism. Upgrade of the municipal lighting was one of the measures designed to provide this city near to Lyon with a new identity. As a result, a new lighting concept was devised for the main square. For the redesign of the Place du Peuple, the planners from Cobalt Lumiére chose the modular and multifunctional Lif system luminaire. The top element with quadruple Tritec optics ensures a harmonious light mood while a further function of the twinspot module is to radiate light onto objects on the square. The interior-illuminated open holder element emanates transparency and lightness. Its custom-made special oval recess, which is additionally coloured red, is a real eyecatcher that attracts the admiring looks of pedestrians not only during the day. For in the evening, its warm, luminous shades of red create an atmospheric sojourn quality at this city square.

Lichtplanung: Cobalt Lumiere, Lyon
Product: Lif top element with quadruple Tritec optics, twinspot module and open holder element

Xinhua Waterfront Park, Shanghai

As part of the Huangpu Waterfront redevelopment programme in Shanghai, the Xinhua Waterfront Park was opened to the public for the first time at the end of December 2017. Olivio exterior luminaires line the pathways, providing atmospheric light in the evening hours.

Landscape architecture:
WEST 8 urban design &
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Products: Olivio system luminaires
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