

Schröder

Experts in lightability

Lighting and **connecting** cities

SHUFFLE SITE



About Schröder

Schröder is the global identity of over 35 locally rooted companies. For more than a century now, we are **experts in 'lightability'**. We embrace the power of light to bring change that goes far beyond simple lighting. We connect people, transform spaces and pave the way to the future.

Over time, we have created **practical, sustainable and beautiful lighting solutions** tailored to locations from Rome's Coliseum to the Channel Tunnel. Our advanced LED-products bring aesthetic refinement to outdoor lighting, for example in Brussels' Grand Place and the historic centre of Cusco, Peru.

Our latest innovation is to use street lighting to **support connectivity in smart cities**. With our infrastructure and innovative products, we now bring data connections to the streets, enhancing the relationship between people and the public space.

2600 employees worldwide share our passion to light up and connect your world. We invest in strong relationships with partners, to **understand our client's needs** in terms of efficiency, sustainability and budget. And even though we are a global company, we strive to manufacture close to our customers.



Synergies for smart cities

Industry experts join forces...

- **Huawei:** telecom equipment expert with relationships to mobile operators
- **Schröder:** lighting expert with relationships to cities
- **Operator:** network expert to guarantee the user experience

... and innovate for the benefit of the cities

- **Urban aesthetics** and OPEX saving with innovative LED lighting
- **Multi-functional column** that supports advanced smart city objectives
- **Infrastructure** makes use of existing and future investment synergies
- **High-speed mobile experience** for demanding citizens and visitors

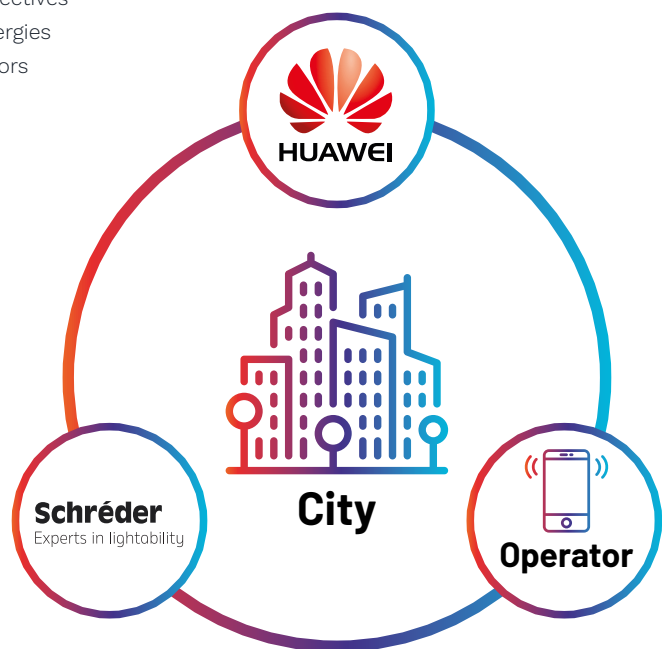
A win-win solution

Mobile broadband technology is continually developing, changing people's daily lives and introducing new business opportunities. An ever-increasing number of smart devices and mobile users has led to an **explosion in traffic**.

Mobile operators need to deliver massive capacity and connectivity, yet it is **very difficult to acquire new sites** in dense urban areas to improve the performance of their communication networks.

Schröder teamed up with Huawei to integrate small cell emitters in Shuffle lighting poles. This allows mobile operators to have **mobile phone coverage at regular intervals** in already available or approved urban equipment. At the same time, cities benefit from the improved level of connectivity for a variety of data applications.

So everybody wins.



A perfect match

Both **Huawei** and **Schröder** are leading solution providers in their respective fields, Huawei in ICT and Schröder in outdoor lighting and more. Together they launched the **Shuffle Site**, Schröder's multi-functional modular light column that integrates Huawei's outdoor small cell emitter to ensure that **next-generation connectivity** is accessible to everyone.



Shuffle Site makes cities smart

Schröder launched the modular **Shuffle lighting-based system** in 2015. It is much more than a lighting column. It can integrate control systems, loudspeakers, surveillance cameras, electrical vehicle chargers, signage, hotspots and now also **mobile broadband**, in cooperation with Huawei.

Schröder is the **perfect partner for smart cities**. It is present in the heart of many cities with its lighting solutions. Light poles are evenly spread and have a height that is perfect for a new layer of connectivity in the city. What's more, the modular system is **versatile and future-proof**. It can easily be adapted for 5G or further standard.

Adding a small cell module to a Shuffle pole is a **clever and cost-efficient solution**. It gives mobile operators access to pre-approved sites, to the available power supply and the regular maintenance by the city. The small cell cabinet is easily accessible for the mobile operator. The antenna modules can be rotated 360° to optimise mobile coverage.

Advantages for mobile operators

- **Even coverage:** light poles are distributed evenly (every 20-30 meters)
- **Optimal height:** ideal for telecommunication purposes (3 to 7 metres)
- **Future-proof:** base transceiver stations can be adapted to 5G
- **Maintenance:** the telecom equipment is easily accessible for the mobile operator
- **No site acquisition:** small cell modules are added to existing/ pre-approved lighting
- **Power supply:** electricity is available, no costly digging needed
- **Public asset:** the poles are maintained regularly by the city
- **Flexibility:** possibility to rotate the superposed modules 360°



~ 100m

Shuffle site
2 modules

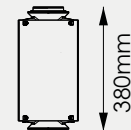


Antenna module

Providing 4G capacity and coverage

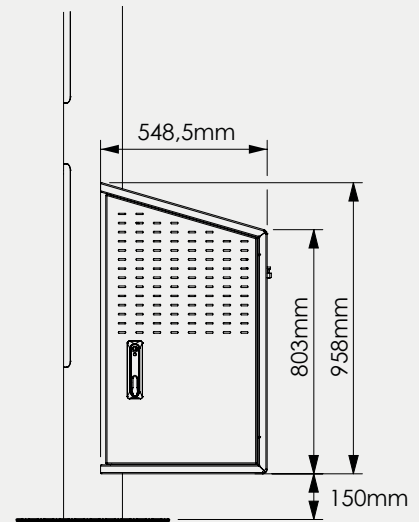
- High-speed mobile connection
- Blends into the urban environment
- Dual band: 3G and 4G
- Easy site acquisition for mobile operators
- Range up to 100m
- Upgradable, antenna can be added later, when additional capacity is needed

Ø 193mm



Side cabinet

- The operator installs and owns the telecom equipment
- Easy access for maintenance
- Waterproof IP material
- Upgradable, base module can be equipped for 5G,



Shuffle is more than lighting

Versatile and upgradeable multi-functional light columns for urban living spaces

Lighting



360° LensoFlex®2



Spot



180° LensoFlex®2



Light ring



180° reflector



Luminaire bracket

Beyond lighting



CCTV



Loudspeaker



WLAN



EV Charger



Intercom



Shuffle connects people to their environment

**More efficient. Smarter.
Interactive. Connected.**

With integrated features such as loudspeakers, CCTV, WLAN, 4G, EV chargers and visual guidance, Shuffle creates **added value for outdoor living spaces**. It makes people truly feel at home in public areas.

The safety, comfort and the sense of wellbeing provided by Shuffle invites people to **enjoy public areas by day and by night**. Shuffle is a **cost-effective, complete solution** that requires low maintenance. Combining multiple functions in a single column minimises the material needed and **lowers the carbon footprint** of an installation.

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