

# CORPORATE BROCHURE







## UNIQUE LIGHTING SOLUTION FOR ALL CHALLENGING ENVIRONMENTS

Extreme environmental factors, including very high or low temperatures (-30 °C to +60 °C), humidity, dust or pollution, as well as zones with fluctuating temperatures, different ceiling heights, difficult to access places and/or different lighting needs per zone, can present a major challenge for your lighting plan. Because how do you make sure the best possible work lighting is realised every hour of the day? And in a fast and flexible manner, without sky-high energy costs? Bever Innovations is able to offer a solution for your precise needs and circumstances, whether they involve storage areas, cool storage/freezing warehouses, production halls, office buildings, outdoor terrains or car parks.

### A standard lighting solution is often insufficient!

Each production environment, warehouse or office building has its own lighting needs. And Bever Innovations realises that a standard solution is not always appropriate. Our high-end intelligent LED products allow us to offer the best custom made lighting solutions for every specific application. We are also able to rise to all other challenges. We will work with you to create the best solution for your processes and employees, while giving you the unique opportunity to test our LED products in practice. Because seeing is believing.

### Intelligent lighting not only helps to save a lot of energy, but also offers opportunities to improve efficiency, productivity, safety and well-being within your company.

Good visibility, reliable safety and effective work lighting play a decisive role in the well-being of your employees. And our lighting solutions have taken this into account. Lighting fixtures can be easily connected to our monitoring system to automatically create a wireless network, which can be accessed and managed via an app on your smartphone or tablet. Also remotely. This offers opportunities for improving efficiency, productivity, safety and well-being within your company. This is partly done by

making connections to alarm, fire and building management systems, but also by analysing system data.

For instance, routing bottlenecks can be identified, and new routes can be devised, by analysing the movement detected by lighting fixtures.





**Bever Innovations's LS fixtures are the ideal solution for extreme environmental factors, and helps to realise efficiency, productivity, safety and well-being.**

#### **More control**

Our intelligent lighting collects information 24/7 about factors like e.g. presence, light intensity and energy consumption, which means your lighting plan or company processes can be optimised.

#### **Lower maintenance**

We supply high quality LED fixtures that offer over 100,000 operating hours. Periodic replacement and major maintenance are thus a thing of the past. In addition, you also gain an insight into your consumption data.

#### **Better lighting level**

Directional lighting (optics) and appropriate fixtures can considerably improve uniformity and lighting levels. This results in the best possible work lighting.

#### **Savings**

Our lights only switch on 'if you are present', which means major reductions can be made in energy costs (up to 90%) and CO<sub>2</sub> emissions.

#### **Plug and play**

Our lighting plans use existing light points wherever possible, which means (unnecessary) changes to lighting infrastructure can be avoided.

## **YOUR CUSTOM MADE LIGHTING PLAN**

**S**torage and production environments, cold storage/freezing warehouses and other utility buildings subject to extreme conditions often face major challenges when it comes to lighting. Do the situations below sound familiar?

#### **Challenges in storage & production environments**

- Large spaces; only a few areas used intensively.
- Existing HID fixtures need time to start up, which means dimming is not an option.
- Fluorescent light sources allow energy to be saved, but light output decreases during their life-span.
- HID light sources must be replaced periodically, which requires time and a lot of money.
- Daylight-based management is not possible in your (conventional) system, but you really wish it was.

#### **Challenges in cooling and freezing warehouses**

- There is only limited personnel activity in zones with large surface areas.
- Your existing gas discharge lighting takes a long time to start up.
- Your gas discharge lighting is practical, but uses extra energy because of the cold.
- Fluorescent lighting offers savings but light output decreases because of the cold.
- The heat generated by light fixtures must be cooled, which results in extra energy costs.
- Only 2% of energy is converted into light, the rest is wasted.







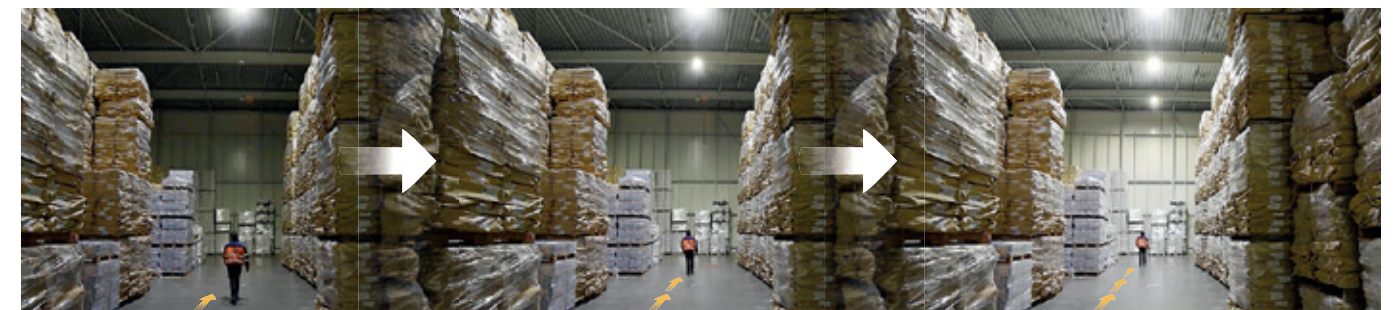
## THE LS LED FIXTURES ARE ABLE TO DEAL WITH ALL CHALLENGES

Our LS LED fixtures are suitable for use in extreme conditions, like zones with various temperatures (-30° to +60°C), as well as dusty and moist environments and difficult to access areas, where working at a height must be avoided for safety reasons. All fixtures are easy to install thanks to our 'Click & Lock' assembly system. This can be done by an experienced engineer or in-house.

### Product characteristics Nichia LED

- 1 basic fixture (80LED)
- High efficiency up to 120 lumen/watt
- High reliability with high lumen packages up to 18,822 Lm
- Light colour of 4,000 Kelvin (neutral white)
- Guaranteed high colour accuracy (CRI 83+) in colour temperature 4,000 Kelvin (specially developed for industrial applications).
- PIR XL - range 15 metres

The colour fastness of the light means the various parts of your storage/production environment or cooling/freezing warehouse can be better distinguished.



### Lighting only switches on 'if you are present'

All LS LED fixtures feature a movement sensor as standard. When movement is detected, the fixture automatically switches on at a pre-programmed light intensity, bearing in mind the temperature in the room, the amount of daylight and applicable health and safety norms. And, if necessary, surrounding fixtures can also be activated. Thermal shocks will be consigned to the past, as will voltage spikes in the grid.

If the temperature of the LED board exceeds +80 °C, AOP - Active Overheat Protection - is automatically activated to reduce the light's temperature. In addition, the fixtures feature a Light Normalizer that continuously measures reductions in light output and, if necessary, automatically compensates for them. Light output remains constant throughout the fixture's life-span (>100,000 operating hours).





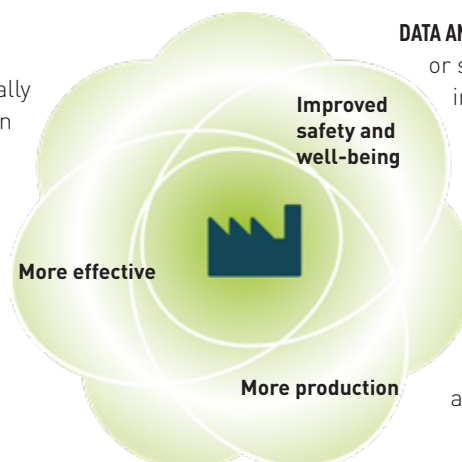
## SMART TECHNOLOGY: WIRELESS CONNECTION WITH THE SURROUNDINGS

Light fixtures can be easily connected to our intelligent network functionality to automatically create a standalone wireless network, which can be accessed and managed via an app on your smartphone or tablet. Each fixture operates like a hub within the network, and automatically exchanges information with other 'hubs'. This creates a safer and more stable network than when communicating via often overfull wifi networks.

Safety is further improved because no form of internet connection is required.

This closed lighting network helps to create unprecedented opportunities for improving well-being, safety, efficiency and productivity in your organisation. We do this by offering various packages, which can be easily expanded in a step-by-step manner in accordance with your specific needs and wishes. A quick snapshot of our possibilities:

**SPECIFIC LIGHTING:** individually configurable LS fixtures switch on and off automatically thanks to in-built sensors. If necessary, surrounding fixtures can also be activated. Effective colour fastness and high colour rendition allow good visibility to be realised.



**DATA ANALYSIS:** the Bever App on your tablet or smartphone offers an effective insight into movement detections per lamp, which can e.g. help to identify routing bottlenecks.

**SYSTEM INTERACTION** is possible with e.g. alarm, fire and building management systems, so lighting can be managed and the latest statuses can be monitored.

Our LS LED fixtures feature **SMART** technology and are ideal for:

### Lighting issues

- Dynamic lighting based on activity and daylight
- Intelligent lighting (SMART Lighting)
- Energy savings thanks to a well-balanced lighting plan
- Movement-related observations
- Intelligent use of sensors

Our fixtures automatically create a wireless network and can be easily configured via the comprehensive Bever App.

### Data analysis

- Identify and optimise routing based on movement detections
- Access energy consumption per network and per individual fixture
- Access maintenance status per fixture
- Remotely modify and maintain the entire lighting plan
- Access consumption-related data

### Interfaces with other systems

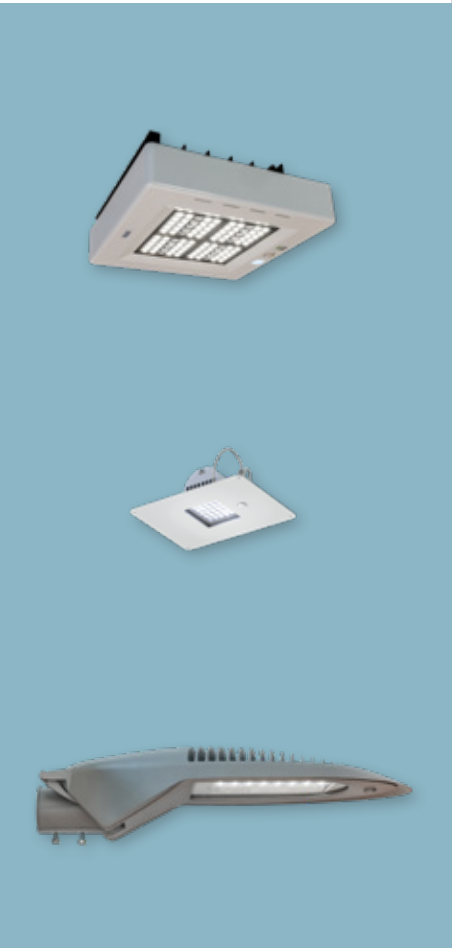
- Connection to fire systems (extra lighting for e.g. emergency exits, evacuation routes and corridors)
- Connection to alarm systems (detection, reporting and lighting)
- Fork-lift trucks (switch on lights, limit speed)
- Physical switch where there is not yet any infrastructure



# PRODUCTS AND FEATURES

The luminaires are very complete thanks to SMART technology: each device has our unique savings potential based on integrated sensors and programmable behaviour. In addition, it keeps comprehensive statistics on its use and the observations made by its sensors.

SMART products



Functions

Set light level

- Set output percentage

Dimming

- Use PIR
- Time to dim
- Dim saving (in %)
- Use deep dimming
- Time to deep dimming
- Deep dimming percentage

Statistics

- Total power consumption
- Kwh saved
- Save as Excel file or local to disk
- Send as Excel file to email

Self-controlled operating conditions

- Luminaire Intelligent Protection System (LIPS).
- Active Overheat Protection (AOP).
- Light Normalizer – No Lumen drop during lifetime.

Day light sensor (only LS fixture)

- Use DLS
- High dim above
- Low dim below
- DLS high dim percentage
- DLS low dim percentage
- DLS behaviour between thresholds

Night-time dimming (only Ambiente)

Attended timeout

An upgrade to "SMART+" makes it possible to share and receive sensor data, connect the luminaire to a bridge and/or act as emergency lighting.

Expansion pack

SMART+

Functions

Sensor sharing

- Use and share information between EOS luminaires (movement and light)
- Dynamically adaptive as a group

Bridge Connect

- Connect/interact with a Bridge, for example, by linking to your Building Management System, alarm and/or fire control system. This is often a customer-specific solution.

Emergency lighting

- Use your SMART fixture as a central emergency lighting
- Detect power cut
- Configure dim level





# SMART TECHNOLOGY

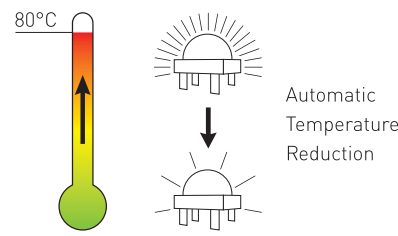
- Intelligent dimming thanks to unique and programmable flexibility
- Easy installation thanks to Click & Lock assembly plate
- Built-in SMART Technology as standard:
  - PIR XL 15 mtr range movement sensor
  - Daylight sensor
  - Status indicator, shows fixture's latest status activity
  - LIPS (Luminaire Intelligent Protection System)
  - AOP (Active Overheat Protection)
  - Light Normalizer: No light losses during life-span (> 100,000 operating hours)
- Wireless configuration and modification via the Bever App
- Wide range of optics, resulting in appropriate lighting levels
- Guaranteed high colour accuracy (CRI 83+) in colour temperature 4,000 Kelvin

# RELIABLE SAFETY



## Active Overheat protection

If the temperature of LED's on the circuit board (PCB) becomes too high (+80°C), the light is automatically dimmed to protect the fixture and maintain its life-span.



## Light Intelligent Protection System

Every segment of the PCB is continuously checked for e.g. voltage spikes, short circuits and temperature breaches.

A status indicator with simple colour codes is used to continuously display the latest operating status of your fixtures:



- Green** = Economy mode
- White** = Full capacity
- Cyan** = Controlled start-up, fewer voltage spikes/ thermal shocks
- Yellow** = Performance modification/status insight via Bever App
- Red** = LIPS and AOP active
- Blue** = Daylight control active





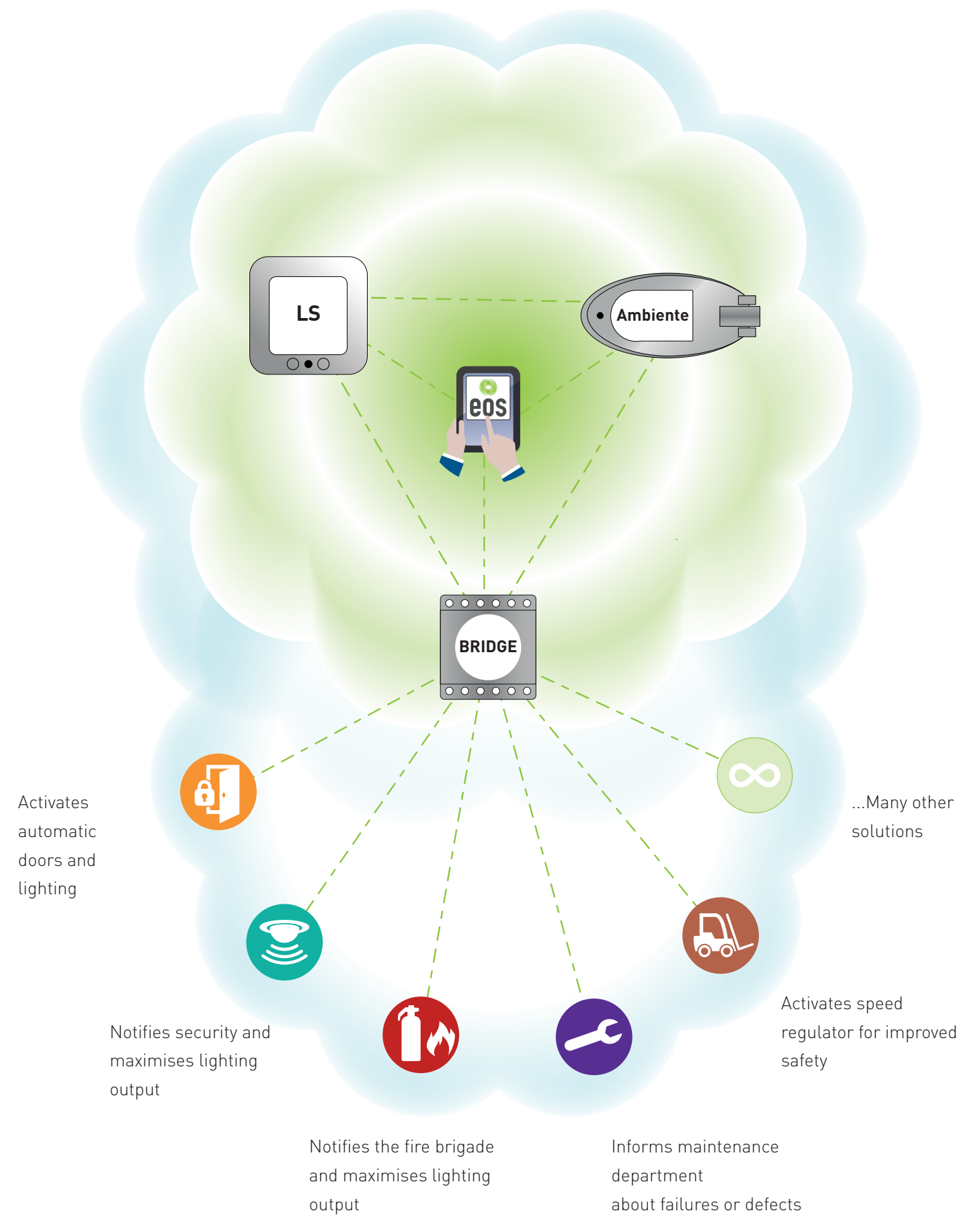


## A BRIDGE TO YOUR EXTERNAL CONTROL AND ANALYSIS TOOLS

The Bridge allows you to connect external control and analysis tools to the SMART network, for fully flexible integration with every business process and access to an unlimited number of functions. The Bridge thus acts like an interpreter that allows your products to 'speak' its language. Various Bridges are available for integrating your specific control or analysis products in the SMART network.

The Bever App allows you to easily configure specific input and output for your LED products when interacting with other SMART products.

The Bridge guarantees endless connection possibilities with your existing company systems:





# EASILY CONFIGURE AND CONNECT TO THE BEVER APP

Bever App offers users an intuitive and intelligent analysis and configuration tool for devices with SMART technology. After finding and authorising all your intelligent fixtures, Bever App will show the whole network on your tablet or smartphone by showing the location of all devices on a single map. By selecting one or more fixtures on this map, you can easily configure devices and extract the latest performance and consumption statistics for your fixtures. Offers an effective insight and overview.



# TRANSPARENT APPLICATION FOR YOUR SMARTPHONE OR TABLET

Bever App is an application which is available for Android devices (via the Google Play Store). Besides the commonly used SMART management functionality, it also offers product specifications and user manuals for all SMART products.



- Configuration**

Easily modify your lighting settings per lamp or group of lamps.
- Integration and grouping**

Connect other company systems to the SMART network for optimum insight and management.
- Statistics**

Easily access operating hours, energy consumption, movement detections and more.





## LED'S CONNECT THE FUTURE

Bever Innovations is an innovator in the LED lighting industry. We have been developing, producing and supplying intelligent LED lighting solutions ever since we were founded in 1996. For indoor and outdoor solutions, as well as the retail fuel market, industry and the horticulture sector. Our team consistently manages to get the very best out of the LED technology. We are continuously setting new standards by realising major improvements in our performance. This not only results in ground-breaking innovations, but also improves our competitive position and offers added value to our customers. And all this without compromising our social values. The production and assembly of our LED products takes place at two sheltered workshops in the Dutch province of Zeeland. We personally manage everything during the design and procurement processes. In addition, production is subject to continuous supervision, which helps to ensure the very highest quality.

### Bever Innovations key words:

- Reliable and committed
- Solution and service-oriented
- Long-term vision and market knowledge
- Corporate Social Responsibility (CSR)
- Innovation and a proactive mindset

### Key words for Bever Innovations products:

- High quality
- Safe and reliable
- Suitable for all climate zones
- 100% Dutch product
- 5-year no-nonsense product guarantee



# INDUSTRIAL

Extreme environmental factors, like very high or low temperatures, air humidity, dust and/or difficult to reach places, can make it very challenging to create an effective lighting plan. Because how do you make sure the best possible work lighting is realised every hour of the day? Flexibly and quickly, without high energy costs? Bever Innovations is able to offer a solution for

your precise needs and circumstances, irrespective of whether your location is a storage area, cool storage/freezing warehouse, production hall, office building or an outdoor terrain. And an interface with our SMART technology enables easier (remote) management and helps to improve efficiency, productivity and safety within your company.

## Social values and CSR

We distinguish ourselves by using our dedication and strong belief in innovation to continuously develop and manufacture top quality Dutch energy-saving products. Over 300 people, at all levels, are involved in the production processes at our sheltered workplaces. A detailed quality control system makes sure every product phase complies with the strictest requirements.

Our policy is to fully manufacture all products in the Netherlands and to be true to our social values and commitment. This will allow us to maximise control over our production activities and guarantee absolute quality and short delivery times of maximum 2 weeks.





RECENT PROJECTS







**BRABANTHALLEN**  
'S-HERTOGENBOSCH



 **Gemeente Schiedam**



**AMC** GROUP



 **Upfield™**

### **Bever Innovations B.V.**

Techniekweg 2 | 4301 RT Zierikzee  
The Netherlands

Tel +31 111 74 54 00

[info@beverinnovations.com](mailto:info@beverinnovations.com)

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