THORN
LIGHTING

LIGHT THAT ELEVATES EFFICIENCY

MANUFACTURING

REFERENCE PROJECT - BUSATIS
FACTORY, LINZ, AUSTRIA

LIGHT THAT ELEVATES EFFICIENCY

WE KNOW MANUFACTURING

The earliest method of manufacturing dates back to circa 2.3 million years ago. Today, the manufacturing world as we know it is going through a fundamental shift as technological advancements drive the industry 4.0 movement.

This has led to a surge in demand for energy efficient solutions ranging from one to one replacements using LED light points all the way through to in-depth control systems designed to maximise energy savings whilst boosting productivity.

As manufacturing develop, intelligent and sustainable lighting solutions will support and enhance production spaces.

WE
MAKE
LIGHT
WORK

REFERENCE PROJECT - CMG, LUCCA, ALTOPASCIO, ITALY

WE C

SUSTAINABLE MANUFACTURING

By creating increasingly sustainable manufacturing spaces, you are not only making a positive, intentional step forward for the betterment of the planet, but you are also helping to advance our collective sustainability goals.

Our intention is to be your partner of choice and to help you achieve your sustainability ambitions. Both our indoor and outdoor solutions deliver energy and cost-saving opportunities, while having the qualities needed for them to operate in what are often tough or harsh environments. For manufacturing, this includes products that are easy to maintain, made from durable materials, and built to the highest IK and IP ratings.

BUILD BACK BETTER GREEN

GOLD 2021 ecovadis Sustainability Rating

ida DARK SKY APPROVED by the International Dark-Sky Association darksky.org

CARE

SUSTAINABLE DEVELOPMENT GOALS

UNITED NATIONS SUSTAINABLE DEVELOPMENT ALIGNMENT

GOOD HEALTH AND WELL-BEING
Both staff and consumer safety is paramount in manufacturing spaces. Lighting plays a pivotal role in improving shift workers visual acuity and with our food safe lighting solutions you can be confident that consumer food safety standards are maintained.

RESPONSIBLE CONSUMPTION AND PRODUCTION
In manufacturing environments, it's important that we reduce harmful substances and materials by consciously preventing hazardous waste and focus on reducing overall manufacturing waste.

CLIMATE ACTION
Manufacturing sites can often function on different shift patterns. This is where lighting technologies such as NightTune and BasicDIM can illuminate from outside-in, whilst lowering output, energy consumption and light spill which can benefit local biodiversity and lower the overall electrical load.

MANUFACTURING

SAFE & SECURE ILLUMINATION FROM OUTSIDE-IN

BEST PRACTICE

ENHANCED SITE SECURITY

In manufacturing environments, managing customer demand can be highly complex. In many cases, the manufacturing process can be a 24/7 operation. In these situations, your lighting installation across the site helps visibility for security teams and if implemented correctly, can work as a support element for your CCTV system.

SAFER SPACES

From goods-in to goods-out and from the main car park to main entrance, lighting can have a very positive impact on the wayfinding experience of visitors or colleagues. Additionally, whilst lighting has a positive impact on site security and colleague safety, we can also balance that need with the needs of the local biodiversity. Through light levels and colour temperature, our NightTune technology helps to respect nocturnal biodiversity.

Recommended solutions

PIAZZA

ISARO PRO

PLURIO

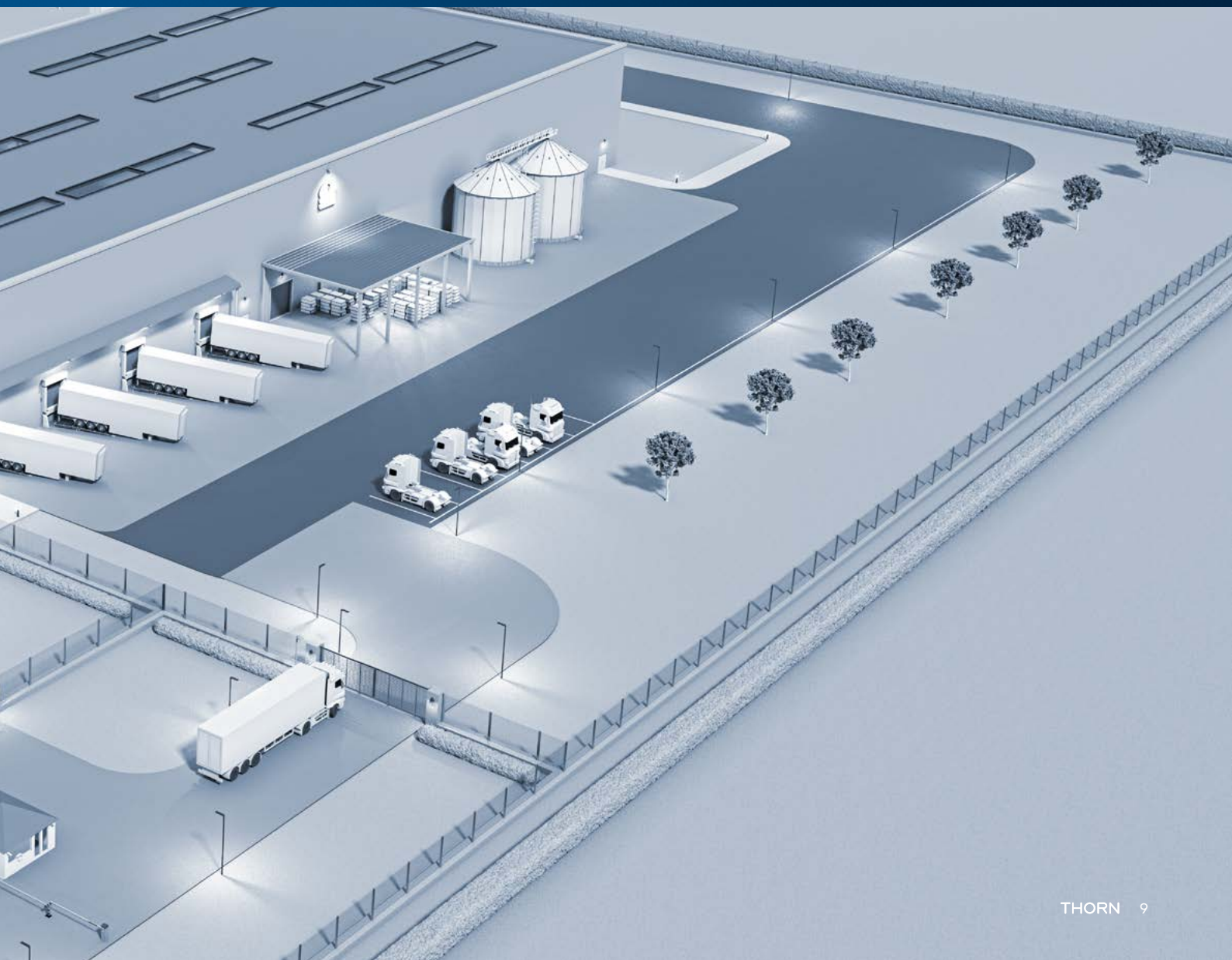
CARAT

AREAFLOOD PRO

THOR BOLLARD

R2L2

CIVITEQ



SECURITY

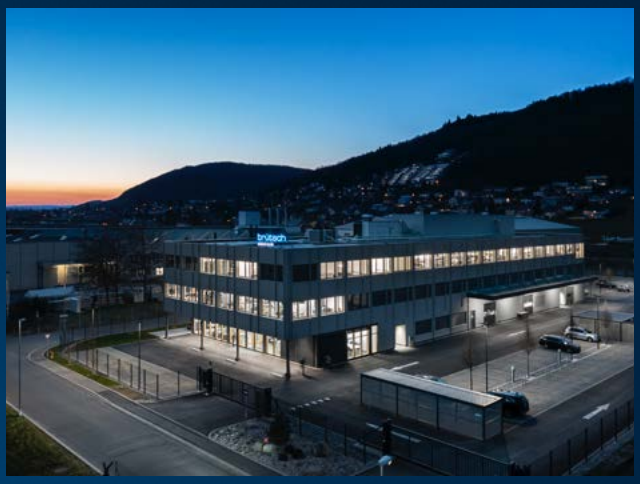
ENSURING THE SITE'S SAFETY

DEPENDABLE LIGHTING

Security entrances are critical areas. It's important that documents, people and goods check out. If the lighting here is poor, then there's a high risk of error.

Good cylindrical illumination in these areas ensures that facial expressions can be far more easily interpreted. This enables security staff to better understand nonverbal communication.

Similarly, higher quality light (CRI 80+) can also help differentiate varying colours of identifying features, such as vehicles and peoples' clothing.



Products used in the scene:

PIAZZA

AREAFLOOD PRO

EYEKON

ISARO PRO

BUILDING SURROUNDS & PATHWAYS

SAFE AND COMFORTABLE WELCOME

ILLUMINATION

Manufacturing buildings are very busy spaces with employees and visitors travelling from the car park to the building as well as goods-in and goods-out staff engaging with delivery and logistics partners. As such it's important that we protect peoples' safety in these spaces.

With technology like Variable Light Distribution (VLD), you're able to balance the needs of pedestrians with the needs of moving traffic and your sustainability aspirations utilising one light fixture. With VLD you can control the colour temperature and light levels independently for both moving traffic and pedestrian needs.

Products used in the scene:

PIAZZA

THOR BOLLARD

PLURIO

Other recommended products:

D-CO BOLLARD

GOODS IN & GOODS OUT

THE BEGINNING AND END OF THE MANUFACTURING JOURNEY

STREAMLINED EFFICIENCY

In any manufacturing setting, it's key that the production line keeps running. This means that signing goods into the facility needs to be a very efficient process. It's also an extremely busy part of the facility that is often utilised around the clock. Therefore it's very important to balance the correct light levels to help with loading and unloading whilst ensuring that the lighting control system maximises energy efficiency.

Products used in the scene: **Other recommended products:**

FORCE LED

AQUAFORCE PRO

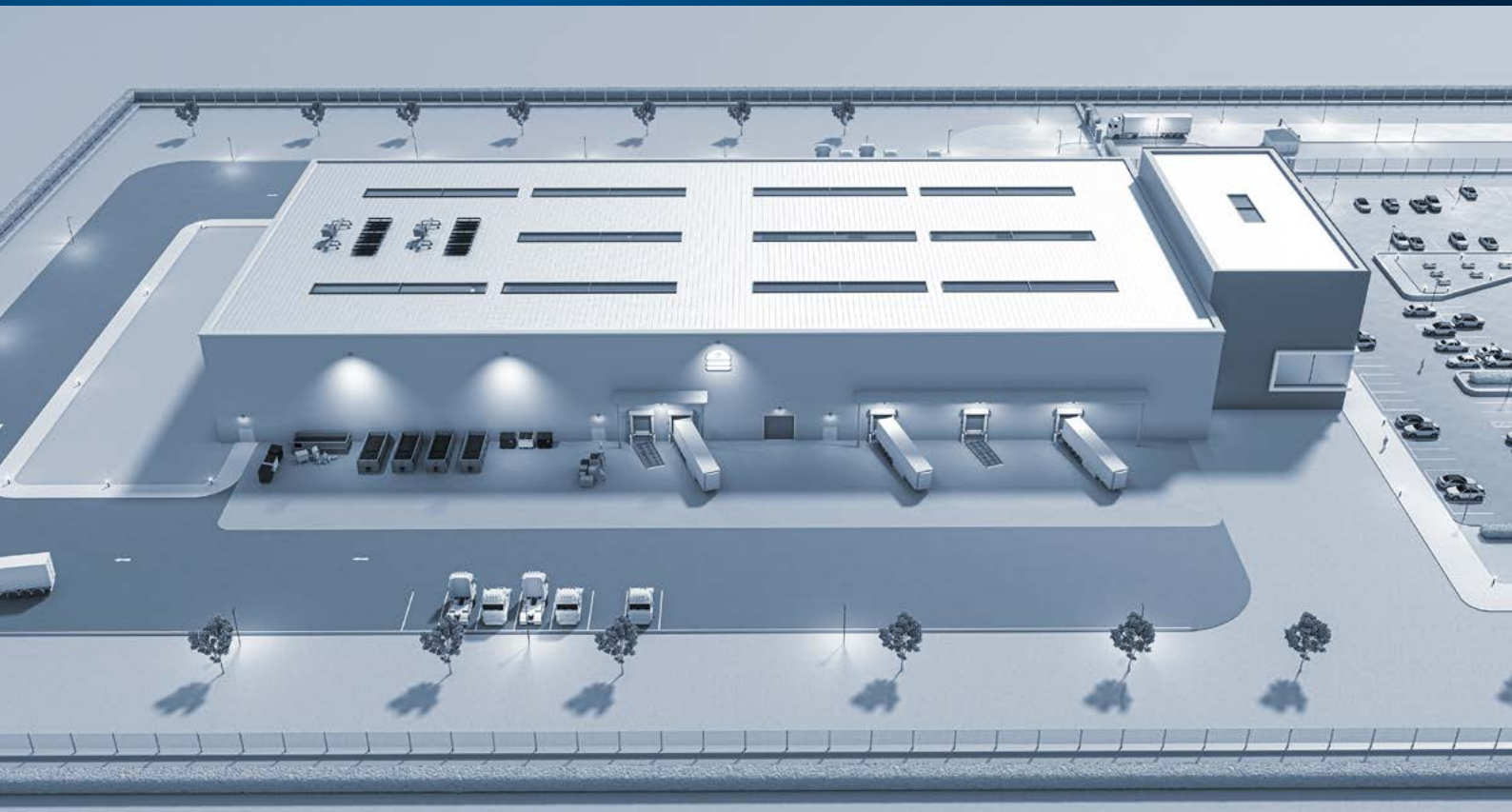
AREAFLOOD PRO

LED FIT

HIGHLIGHTING SURROUNDING SPACES

When loading and unloading, it's fairly common for heavy machinery to be required. This represents a potential health and safety challenge. This is where good quality light and strong light levels can help with the safety and wellbeing of colleagues and logistics partners alike.

In addition to the loading and unloading element, it's incredibly important to illuminate the roadways. There are often very large vehicles moving around in the same space as much smaller vehicles. Lighting levels must therefore highlight all moving traffic and people to ensure the site remains safe from entrance to exit.



FOOD MANUFACTURING

SAFE LIGHTING FOR FOOD PRODUCTION

CLEANLINESS AND SAFETY

Luminaires must be easy to clean with a design that prevents the accumulation of dust, dirt, fluids and other contaminants. Cleaning agents or ingredients can be corrosive and so careful selection of luminaire materials to minimise damage is an important consideration.

The lighting installation should provide the right light irrespective of the challenging conditions such as high levels of dust, steam, and moisture. This means that the light points must be of high quality and offer a very low failure rate to ensure any downtime is minimised.

For both food processing environments as well as packaging spaces, our focus should be on food safety and cleaning processes. Any products to be used within these environments will need to conform to and align with food safety standards.

Products used in the scene:

AQUAFORCE PRO

Other recommended products:

FORCE LED

KEY CONSIDERATIONS

01 **CLEANING AND FOOD SAFETY**
Products used within this environment must conform to and align with food safety standards

02 **IN THESE SPACES**
Always consider IP, IK and chemical ratings of a fixture

03 **CHECK LEVELS**
Make sure the lighting levels are correct and in accordance with EN 12464-1

04 **LIGHT QUALITY**
Strong colour rendering (CRI 80+) is important for the quality control section of the production line

GENERAL MANUFACTURING

ILLUMINATING PRODUCTIVITY

EFFICIENCY AND PRODUCTIVITY
Good lighting for general manufacturing spaces should help to boost productivity and enable people to efficiently undertake tasks. Thorn's high quality lighting provides safety and comfort, with minimal glare, keeping operations running smoothly.

Heat, dust, high ceilings, vibration and corrosion are commonplace in most manufacturing settings. Good industrial lighting is built to withstand these tough environments, while also providing powerful light, ensuring the ideal light solution for industrial spaces.

Products used in the scene:

HIPAK

Other recommended products:

CONTUS

ESCORT

AQUAFORCE PRO

KEY CONSIDERATIONS

01 **LIGHTING COMFORT**

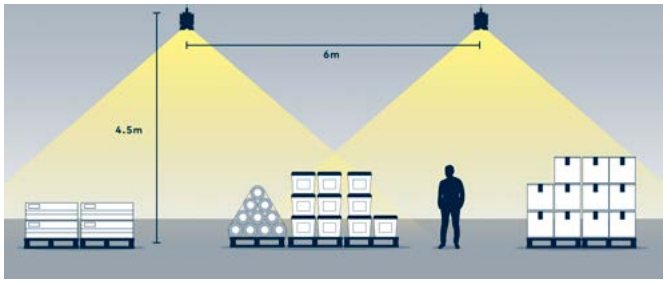
It's important that the lighting installation minimises discomfort glare, especially on the production floor

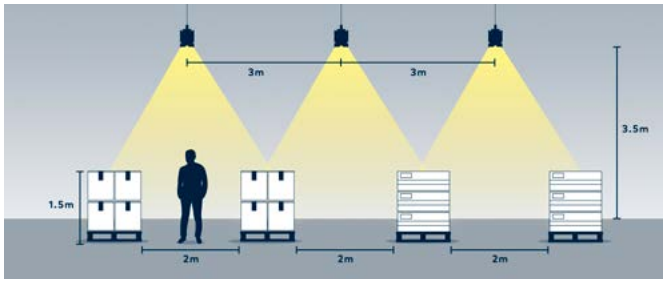
02 **ADDING CONTROLS**

An LED upgrade from T8 technology can offer exceptional energy savings, but intelligent controls can add an additional 33% savings beyond fixture upgrade

03 **COLOUR RENDERING**

Good colour rendering (CRI 80+) is essential to help with colour recognition along the production line and throughout quality control





PLANT ROOMS

RELIABLE SOLUTIONS IN CRITICAL SPACES

SUPPORTING CORE SPACES

A plant room is essential in keeping the rest of a manufacturing site operating smoothly. This is where many types of utilities are controlled, from boilers to generators and other significant machinery. While these spaces are not used by vast numbers of people, strong and well-designed lighting is essential here.

When the space does need to be used, for example by engineers, adequate visibility is needed to ensure the smooth and safe operation of tools, machinery and other necessary equipment. However, to increase energy savings and improve efficiency, it's important to include a controls solution in order to provide light only when it is needed.

Products used in the scene:

AQUAFORCE PRO

Other recommended products:

FORCE LED

ESCORT

AQUAFORCE

OFFICE SPACES

COMFORTABLE WORKING ENVIRONMENTS

KEY CONSIDERATIONS

01 PERFORMANCE
CRI 80 or higher helps to ensure good light quality for colleagues and visitors and good vertical uniformity helps improve facial recognition and communication

02 COMFORT
Help towards low glare and better comfort as a whole across the space by using products rated UGR19 or less

03 CONTROL
Make sure you're controlling the lights correctly with an intelligent control system that optimises energy consumption throughout the building

Products used in the scene:

CHALICE PRO

BETA 3

Other recommended products:

OMEGA PRO 2

IQ BEAM

LIGHTING CONTROL SOLUTIONS

RIGHT LIGHT, RIGHT TIME

CONTROLS - OUTDOOR

Enhanced energy savings are just one of many benefits to installing affordable lighting controls. However at Thorn, we continually aim to deliver the best of both worlds. PIR systems like UrbaSens Detect mean that you can balance your energy saving targets with security illumination. By maintaining a lower level light output through the night, you exponentially lower energy consumption whilst still aiding CCTV through required light levels. NightTune technology can make automatic adjustments to the level of light emitted by a light fitting, as well as its colour temperature, to suit the exact time of night and level of traffic. Perfectly balancing your need for light with the needs of local ecology.

UrbaSens Detect – integrated PIR system providing autonomous pedestrian, bicycle and traffic sensitive illumination. Providing the balance between energy reduction and security. Ideal for refurbishment projects.
UrbaSens Sentinel – Autonomous motion detection and increased energy savings whilst supporting NightTune & Variable Light Distribution.

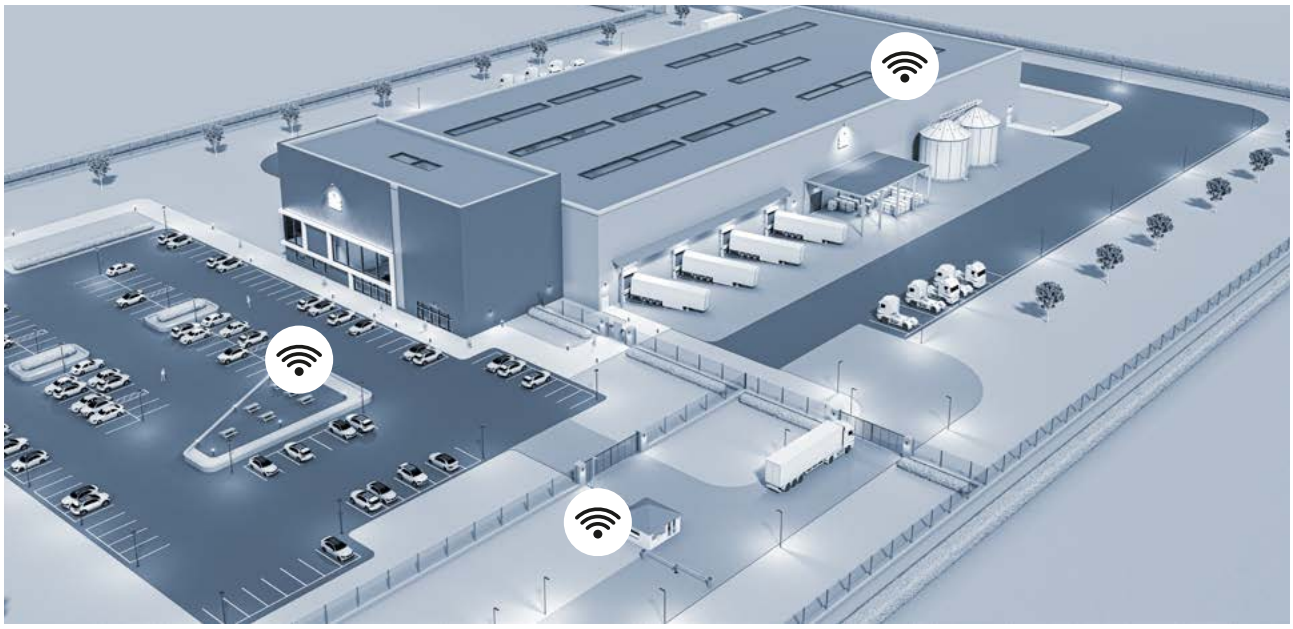
NightTune – a sustainable solution, adjusting both colour temperature and output to protect the nocturnal environment, wildlife and promoting human wellbeing without compromising safety.

Variable Light Distribution – taking NightTune technology to the next level by integrating different optics within the same luminaire to ensure pedestrians, cycle paths and roadways are visually identifiable and correctly lit.

CONTROLS - INDOOR

Even though there are significant energy savings to be had by upgrading from old lighting technology to more energy efficient LED solutions – there's the potential to reduce energy consumption by a further 33% by implementing and utilising intelligent controls.

When those controls are wireless, you can connect all light points via a mesh network, which means it's possible to use existing cabling infrastructure and still benefit from the energy savings that come from ensuring that spaces are only fully illuminated when natural light levels are low and when fewer people frequent an area.



EMERGENCY LIGHTING

A SAFE WAY OUT

Our Voyager range of emergency luminaires are designed, manufactured and tested to meet the latest European standards regarding safety and electromagnetic compatibility.

The purpose of emergency lighting is to allow people to make their way safely out of buildings in the event of an emergency, for example during a black out. Emergency safety lighting and illuminated exit signage ensures able bodied people can safely evacuate a building to a place of safety. In these situations, lighting can save lives and keep people calm.

It goes without saying that emergency lighting must comply with all relevant rules and regulations. But the best emergency lighting goes further, incorporating flexible luminaires with ease of installation and maintenance, long life and energy efficiency. Thorn's 90+ years of experience and reputation for quality are your guarantee of an optimal emergency lighting solution.

All emergency lighting should be specified and designed in accordance with local and/or national regulations

EN 60598-1	LED emergency luminaires
EN 60598-2-2	Graphical symbols. Safety colours
ISO7010	and safety signs. Registered safety signs.

VOYAGER SQUARE

VOYAGER SOLID

VOYAGER ONE

OUTDOOR LIGHTING SOLUTIONS

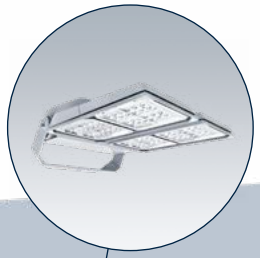
LIGHT THAT ELEVATES EFFICIENCY

CARAT
Enhancing facial recognition

THOR BOLLARD
Comfortable visual guidance

AREAFLOOD PRO
Superior optical performance

PIAZZA
Lighting with minimal light pollution

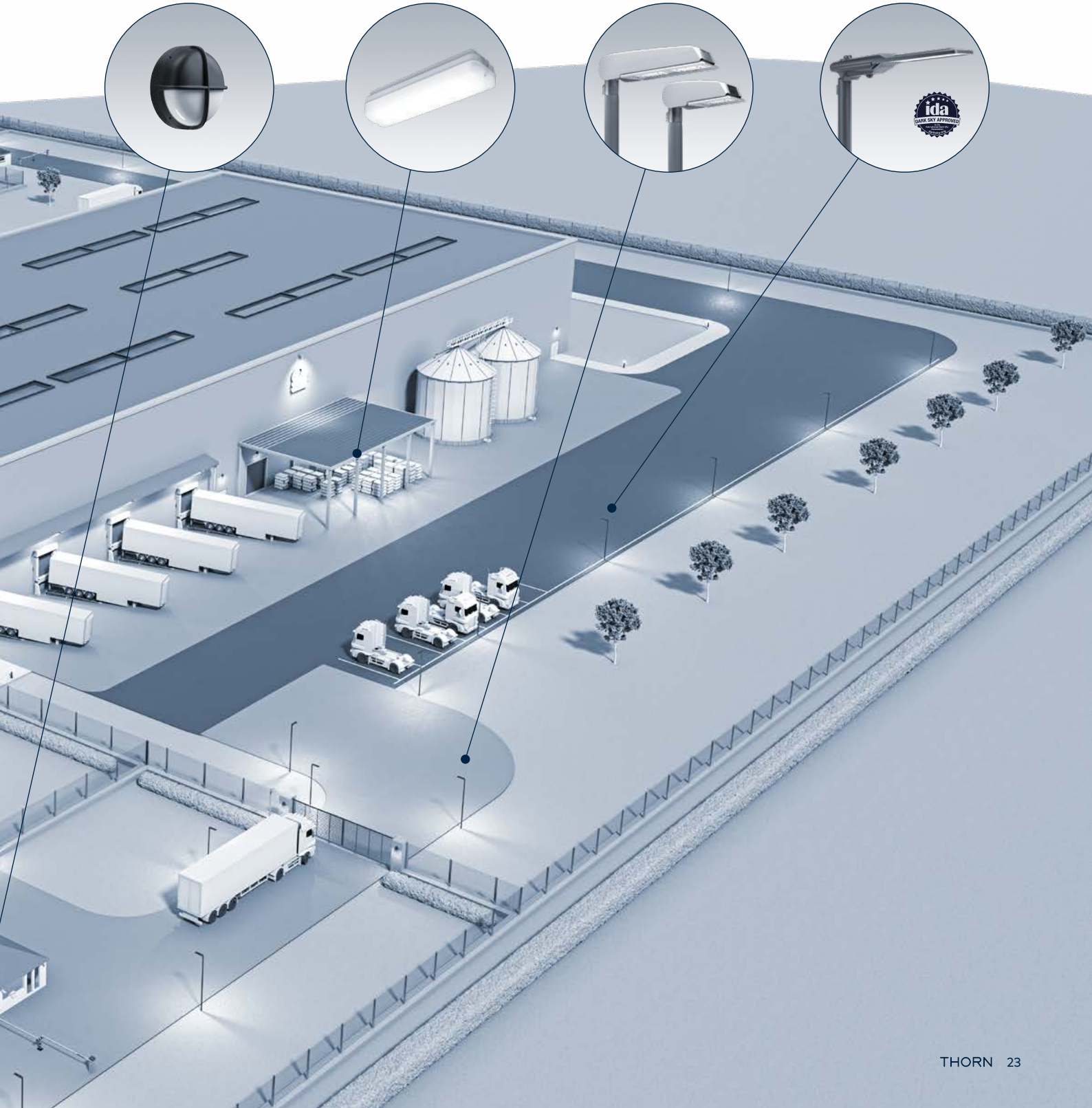


EYEKON
Robust and energy efficient bulkhead

ESCORT
A robust IP65 bulkhead for surface mounting

CIVITEC
Cost-effective LED road lighting solution

ISARO PRO
Brings comfort and safety to any road



INDOOR LIGHTING SOLUTIONS

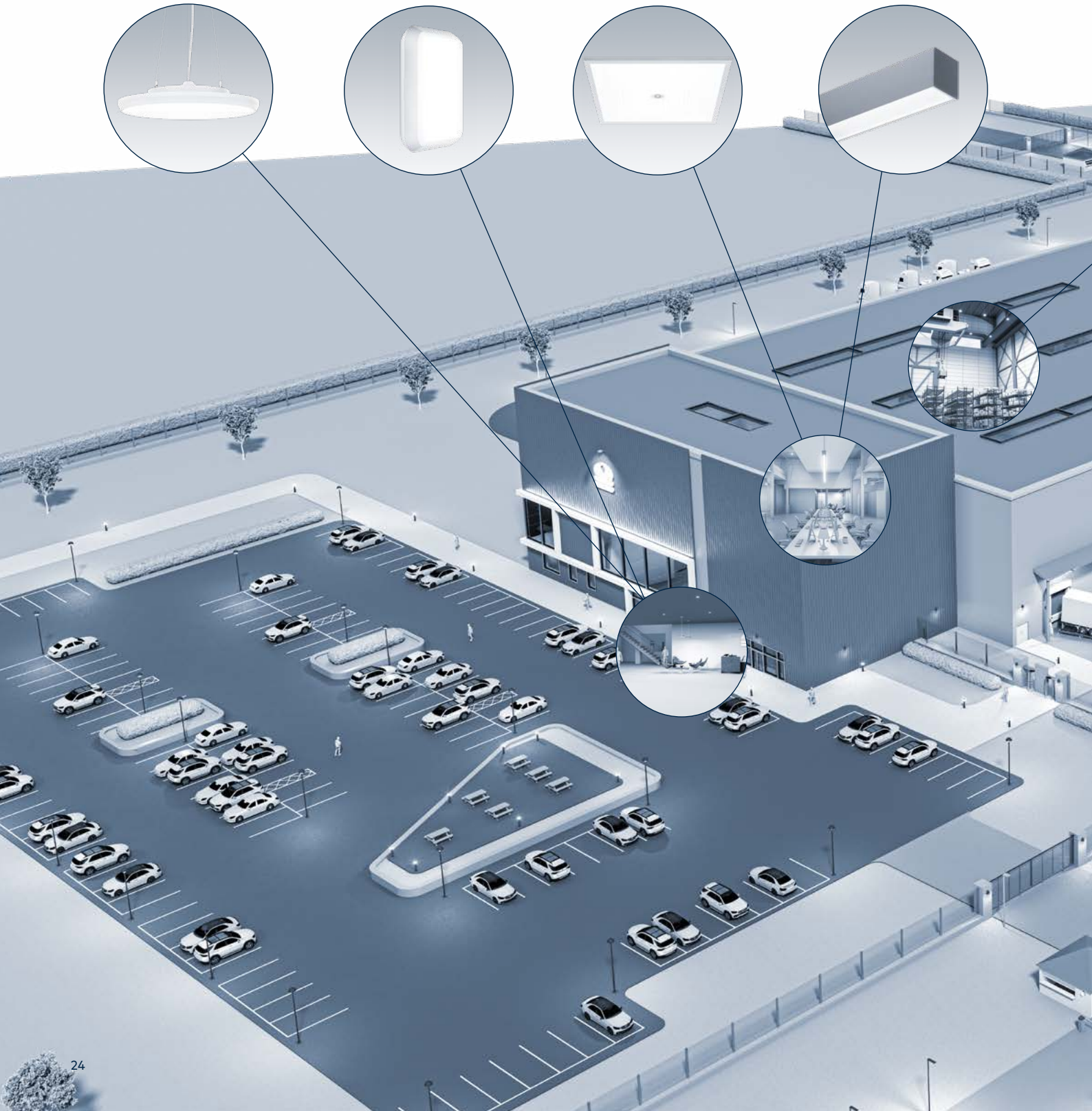
LIGHT THAT ELEVATES EFFICIENCY

NOVALINE STYLE
Contemporary versatility and functionality combined

KATONA
The primary choice for secondary areas

OMEGA PRO 2
Immersive variable light control

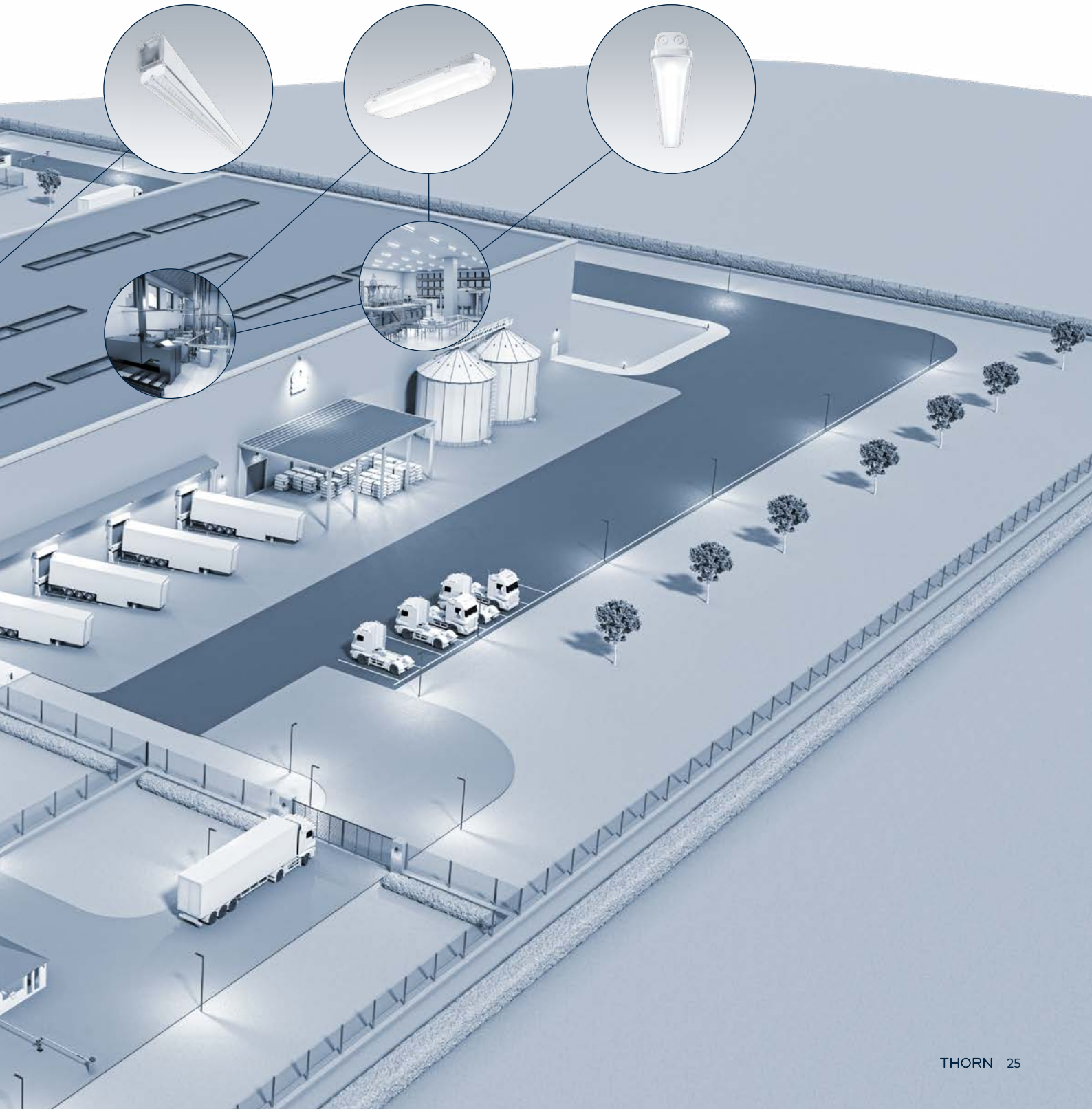
EQUALINE
The right solution to fit any space



CONTUS
Highly efficient
continuous light line

FORCELED
Compact and durable
with a unique diffuser

AQUAFORCE PRO
Durability and versatility
at its core



THE BENEFITS

OF WORKING WITH THORN

01

OVER 90 YEARS' EXPERIENCE

Yes, we really have passed the 90-year mark! Thorn has had nearly a century to develop its unique knowledge and expertise. And the best part is that we can build on this knowhow to make sure that we are always ahead of the game with the latest technology, the most reliable services and a price that works for everyone.

ELECTROMAGNETIC COMPATIBILITY (EMC) TESTING LABORATORY

02

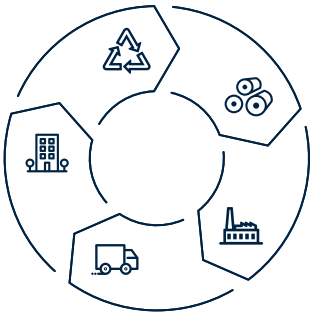
CONSTANT RESEARCH AND INNOVATION

Thorn has been at the forefront of lighting technology for decades, and continues to push the boundaries. Our investment in R&D and innovation aims to bring customers the very best performance, thanks to the latest advanced engineering in light and electronics, with in-house development.

03

EXTENSIVE TESTING AND CERTIFICATION

Thorn's products undergo demanding tests for compliance, safety and performance. With Thorn, you can be sure that your lighting product does what it says it will do, meets all relevant standards and regulations, and comes with a guarantee of quality and safety.



04

ENVIRONMENTAL PRODUCT DECLARATION (EPD)

At Thorn we provide EPDs as a standard service. The EPD for each specific product details its impact on the environment throughout its lifecycle. The EPDs are based on EN ISO 14025 and EN 15804. The information given by an EPD is relevant not only for environmental certifications such as LEED, BREEAM or ÖGNI. EPDs form the data basis for an environmental building assessment.

05

BEST-IN-CLASS OPTICS

Thorn's product range benefits from our class-leading optical systems. They offer several precision light distributions to fulfil various requirements, with excellent uniformity and glare control.

06

QUALITY FROM THORN'S SPENNYMOOR FACTORY

Thorn's products go through intensive quality manufacturing, assuring the best processes to develop better products all the way. In addition, we are one of the first companies in the UK to be certified to ISO 14001 – the standard for environmental management. In addition, we have successfully been recommended for certification to ISO 50001:2018 for energy management. Our factory at Spennymoor in the UK has achieved a reduction of approximately 25% in significant energy uses and 14% in electricity use compared to the previous year.

07

FIVE YEAR GUARANTEE

All Thorn products carry a five year guarantee.

5 YEAR GUARANTEE

08

ZUMTOBEL GROUP MEMBER

The Zumtobel Group is an international lighting group and a leading supplier of innovative lighting solutions, lighting components and associated services. With its core brands, Zumtobel, Thorn and Tridonic, the Group offers its customers around the world a comprehensive portfolio of products and services.

GET IN TOUCH

www.thornlighting.com/contact

WE MAKE LIGHT WORK

03/2023