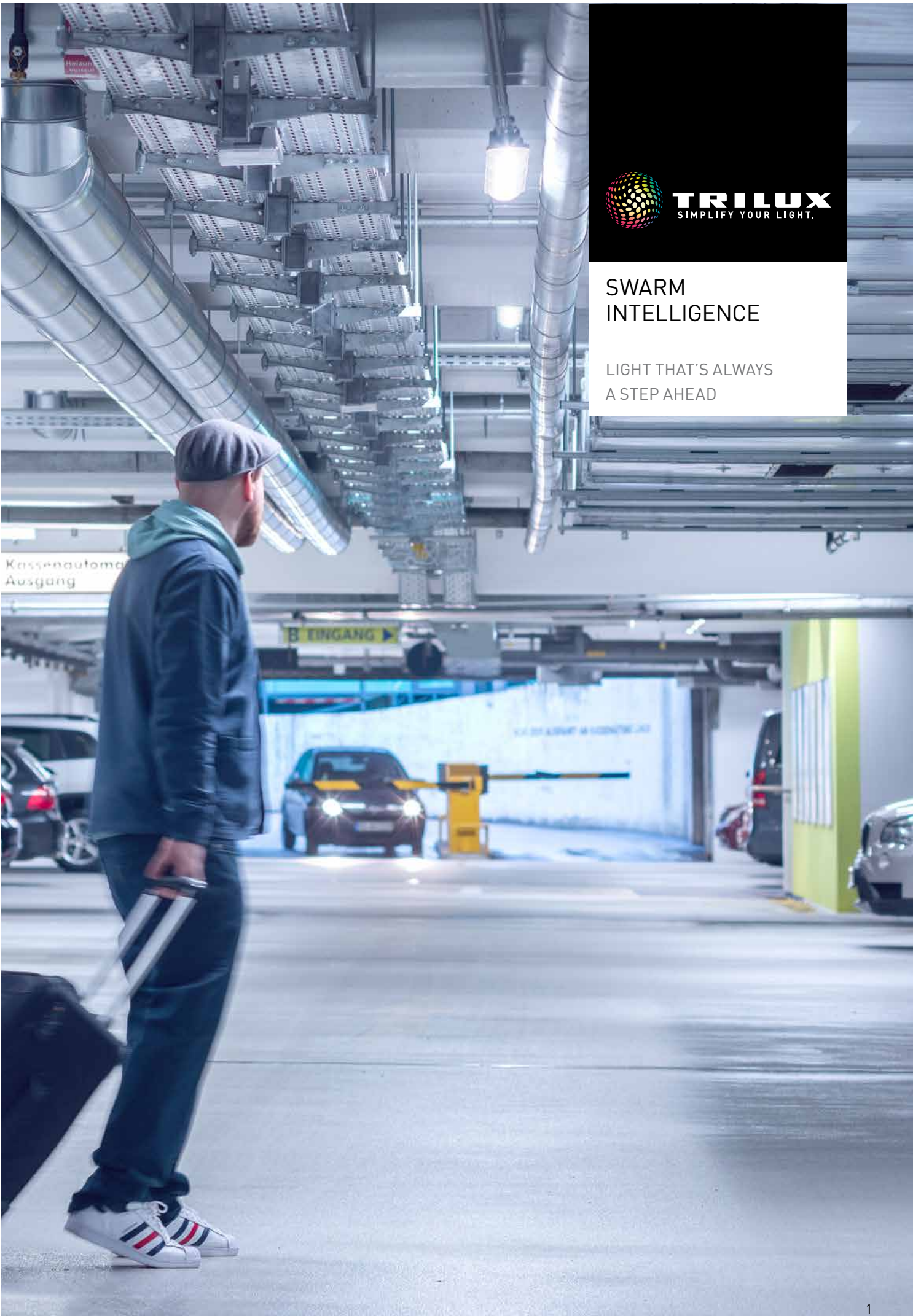


**TRILUX**  
SIMPLIFY YOUR LIGHT.

## SWARM INTELLIGENCE

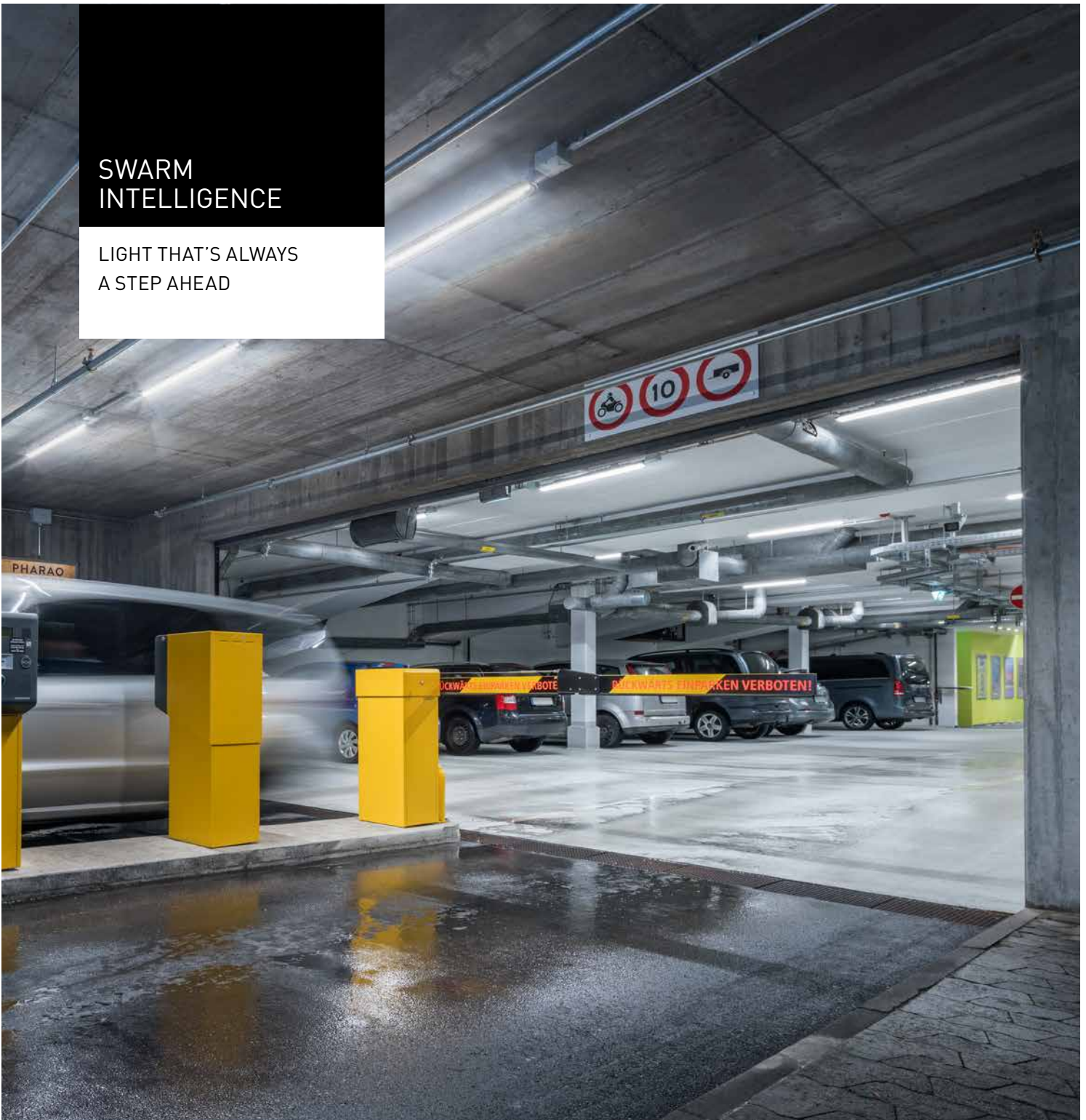
LIGHT THAT'S ALWAYS  
A STEP AHEAD





## SWARM INTELLIGENCE

LIGHT THAT'S ALWAYS  
A STEP AHEAD



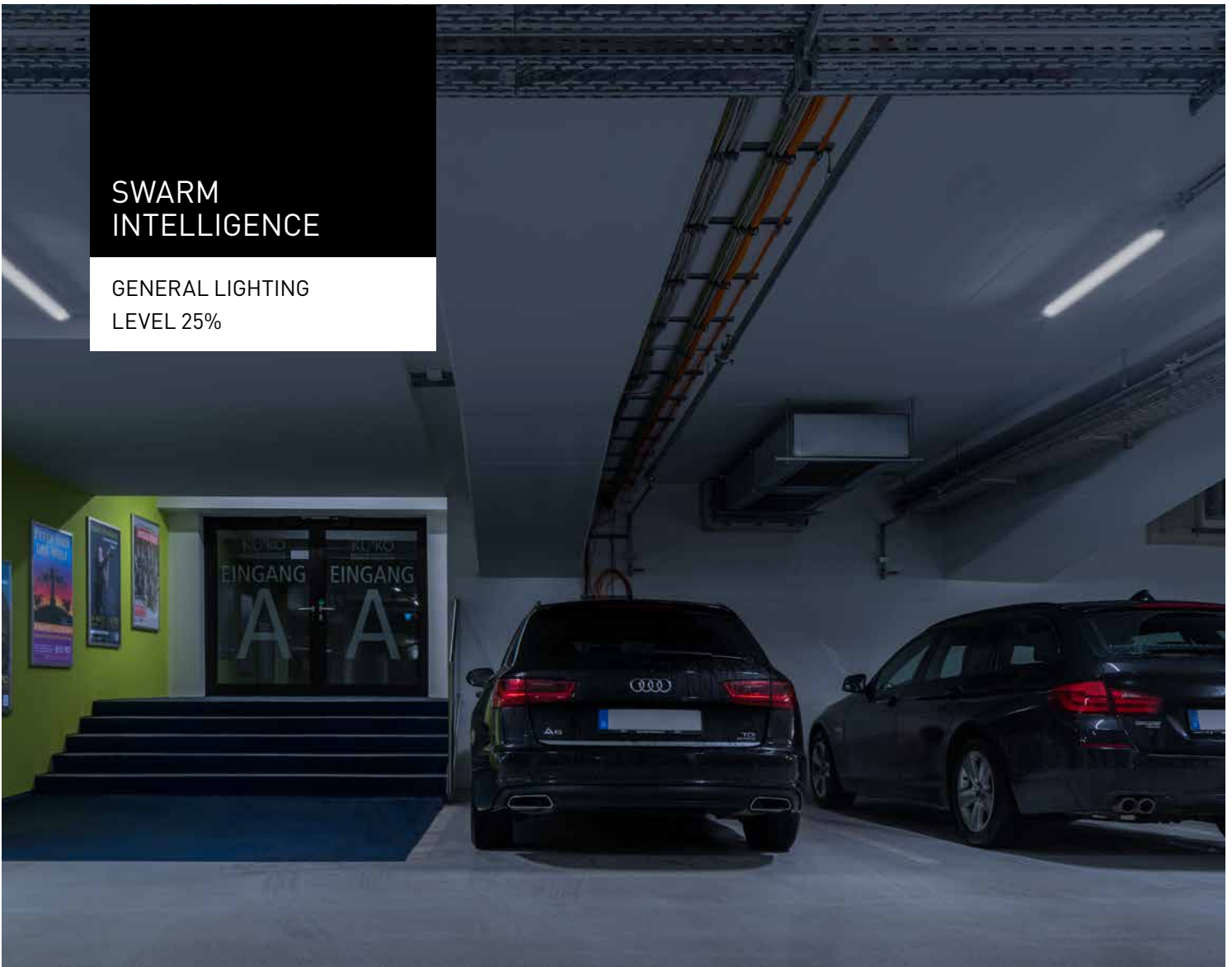
### **Greater energy efficiency and lighting comfort with swarm intelligence**

Good light as we understand it is much more than simply solving pure lighting tasks, as ably demonstrated by weather-proof luminaires such as Nextrema G3 LED from TRILUX. Equipped with swarm intelligence, these elevate lighting tasks to a completely new level.

Light is always a step ahead if luminaires from the X-Range portfolio operate hand-in-hand with TRILUX swarm intelligence. Those implementing running light benefit from significantly lower energy costs, increased lighting comfort and an improved building image, and such investments prove to be rewarding particularly with car parks.

## SWARM INTELLIGENCE

GENERAL LIGHTING  
LEVEL 25%



### **This added value is illuminating**

With swarm intelligence, simple weather-proof luminaires are transformed into smart lighting installations with high added value. The technology is particularly advantageous in three ways:

- **Maximum energy efficiency:**

the combination of durable LED luminaires and TRILUX swarm intelligence leads to high energy savings. If continuous light is dispensed with, operating costs are sustainably reduced by up to 81 percent. The general light function achieves an optimum balance between the need for greater safety and efficient operation of the lighting system.

- **Impressive lighting comfort:**

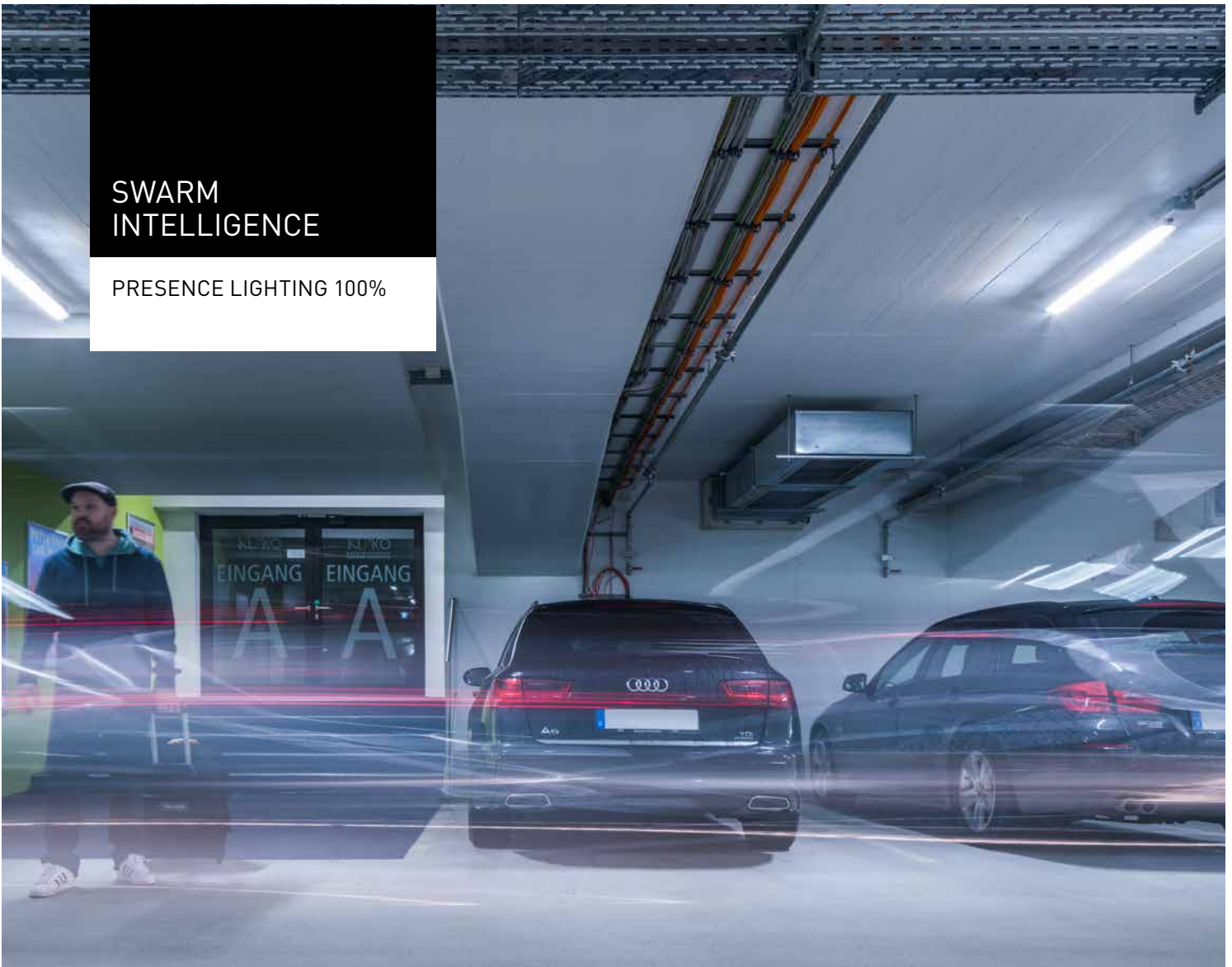
light must no longer be saved because it is only used where it is momentarily needed. Thanks to the general light function, nobody enters a completely dark area anymore. Unpleasant bright-dark zones are also minimised in this way.

- **A significantly better image:**

well-planned systems with swarm intelligence offer a tangible plus with orientation and safety. The reason is that LED luminaires equipped with the swarm function create optimum visual conditions in the momentarily frequented areas without increasing the lighting system output to 100 percent throughout the complete car park. A further plus: this light utilised according to needs is an effective instrument in the fight against 'queasy feelings' that come over users in poorly illuminated car park areas.

## SWARM INTELLIGENCE

PRESENCE LIGHTING 100%



### Why intelligent does not mean complicated

During the development stage of its swarm intelligence, TRILUX focused on the technology being easy to handle in each project phase.

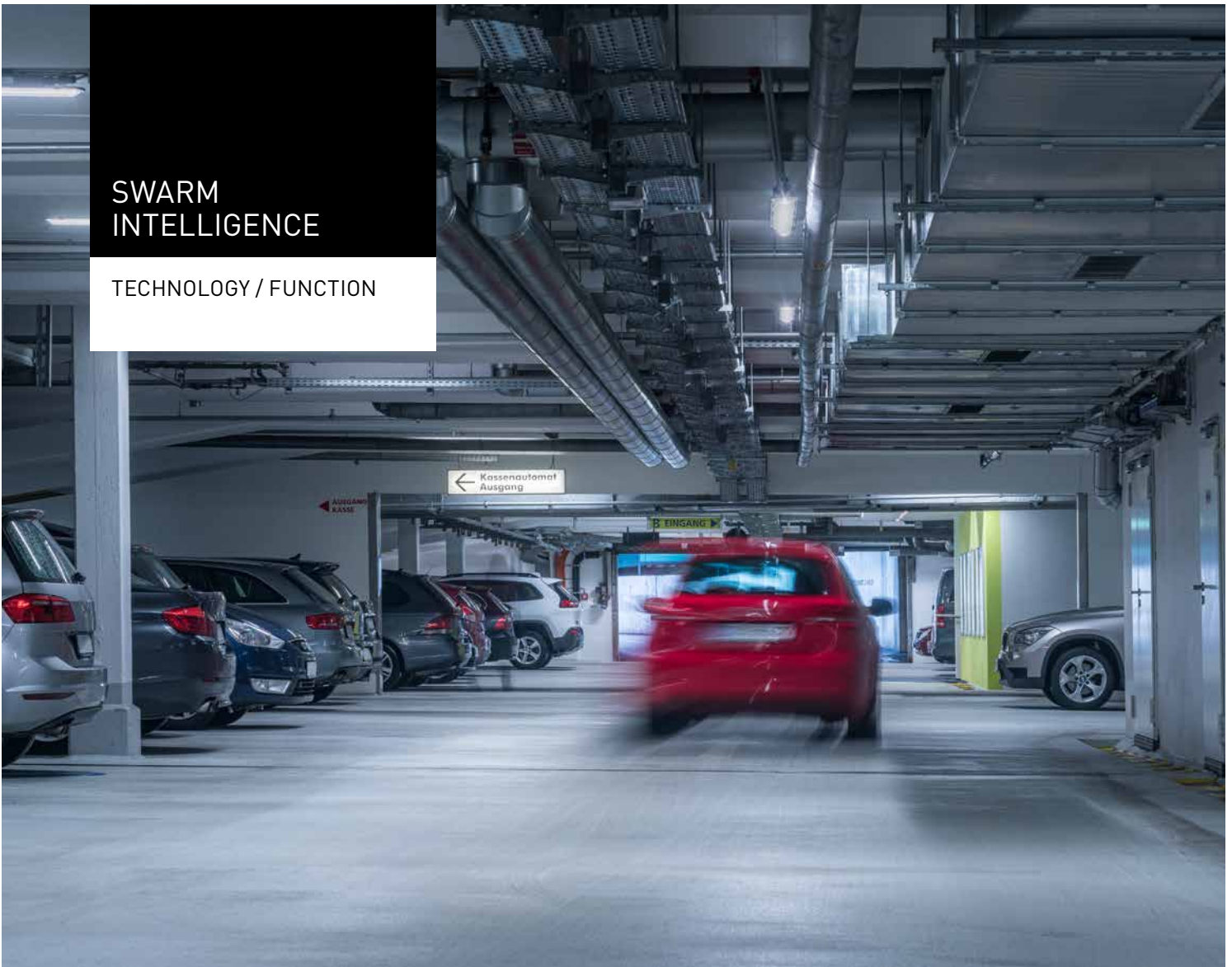
- Its installation takes no longer than installing DALI luminaires without swarm mode. Power supply and control of the luminaires is implemented via the familiar 5-core cable.
- The commissioning process is carried out extremely quickly using a separate remote control – a maximum of 20 seconds is needed for one luminaire group. The system is designed to prevent confusion and each function has its own button on the remote control.
- Planning of the swarm mode systems is also simple. Upon request TRILUX designs and specifies the switching and positioning of the individual luminaires that also takes the optimum direction of movement into consideration. The same applies to support for

commissioning, a service completely reflecting our brand commitment of Simplify Your Light.



# SWARM INTELLIGENCE

TECHNOLOGY / FUNCTION



## The underlying principle of running and pre-running light

TRILUX swarm intelligence is based on a finely coordinated interplay of technology and functionality.

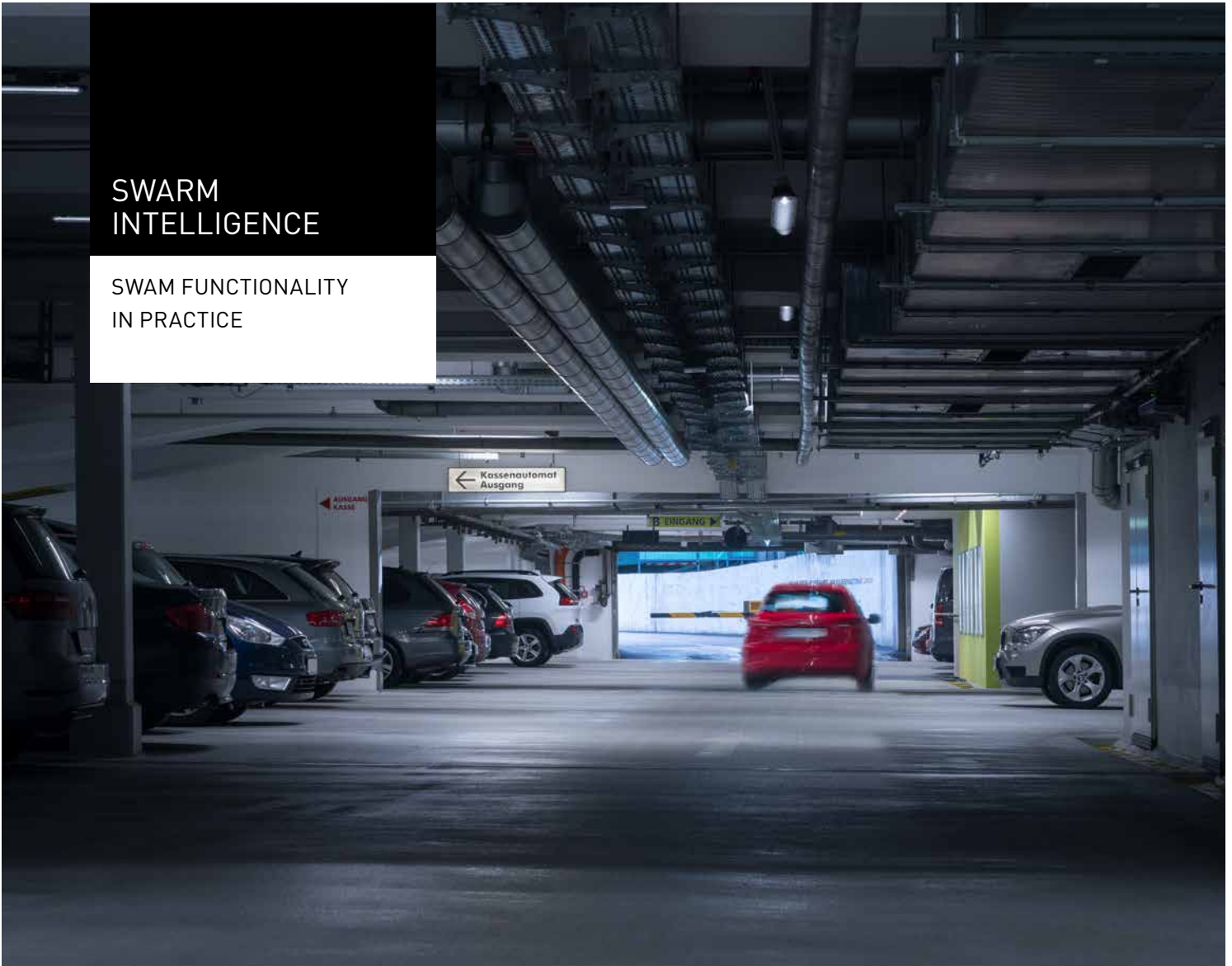
- The systems feature mature sensor technology for daylight control and presence detection. Adjacent groups of luminaires can also intercommunicate.
- All luminaires in a group are switched synchronously. The complete group is switched on or off as a single unit or operates at the previously defined general light level.
- Up to 15 luminaires can be grouped together.
- The effect of running light is achieved via variable switching of the various groups.
- The swarm mode functions thanks to the smart sensor technology in both running directions (please take into consideration the various product models).

*Adjacent groups of luminaires can intercommunicate*

*The swarm mode functions in both directions*

## SWARM INTELLIGENCE

### SWAM FUNCTIONALITY IN PRACTICE



#### How swarm functionality works successfully in practice

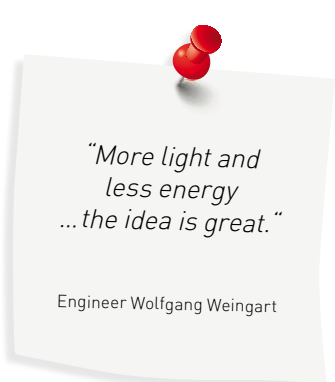
An underground garage in Rosenheim, Germany, ably demonstrates that TRILUX swarm intelligence and X-Range luminaires supply what they promise in everyday practice. An excerpt from the press release:

If the light is always a step ahead of users in underground garages, not only is their feeling of safety improved but the lighting installation can be operated with especially high efficiency – as with the parking lots located below the Culture and Congress Centre (KuKo) in Rosenheim, Germany and equipped by TRILUX with modern LED systems.

The fight against dark zones there is taken up with running light enabled via intelligent control, and this smart feature simultaneously improves the safety and energy efficiency. The system dims down to 25 percent where no increased lighting level is needed.

#### A winning idea

“More light and less energy,” is how the engineer Wolfgang Weingart describes the before-and-after comparison. Instead of continuous lighting, Rosenheim citizens now benefit from a user-friendly and efficient lighting concept. “The idea is great. Running light is particularly suitable in our one-way underground car park with its clear traffic guidance.”



*“More light and less energy ... the idea is great.”*

Engineer Wolfgang Weingart

Do you have any further questions or interest about a TRILUX swarm intelligence solution?  
Find your personal contact partner at [www.trilux.com/contact](http://www.trilux.com/contact)

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