

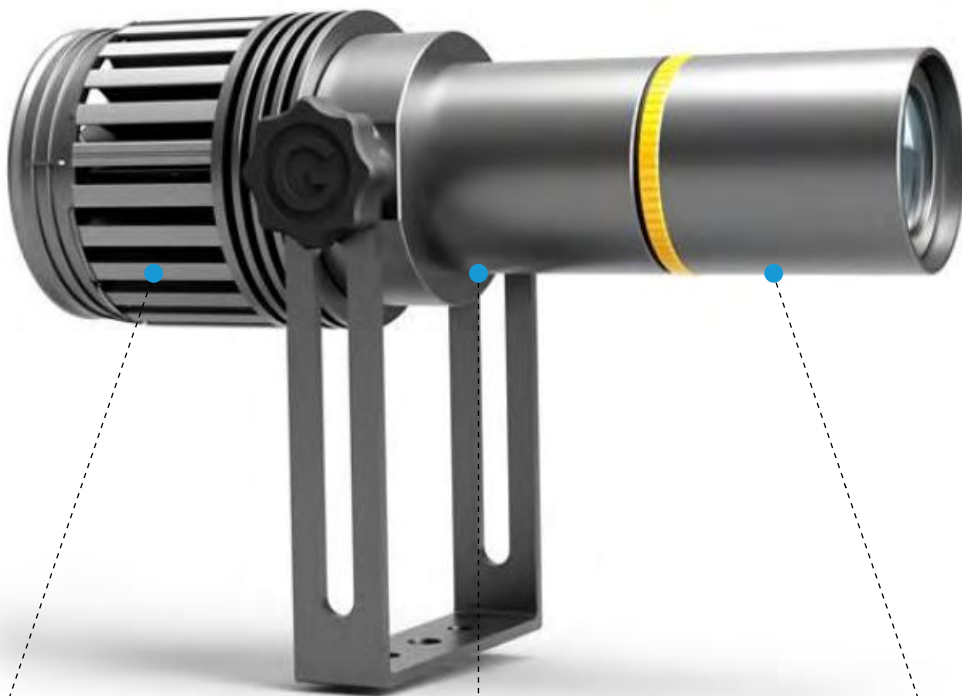
LED PROJECTORS EXAMPLES OF USAGE



 **ALIS**

 clarity

LED YOUR SAFETY SHINE



industrial design suitable to all kinds of operation

- active/pasive cooling;
- -30 °C to + 35 °C;
- suitable for humid and dusty environment;



wide range of different optics

- from 8 ° to 40 ° optics;
- with higher resolution;
- differs according to the environment;



wide range of ISO safety symbols

- ISO symbols;
- custom symbols;
- large symbols ex. pedestrian crossing;

ADVANTAGES OF LED FLOOR MARKING

ELIMINATION OF OPERATIONAL BLINDNESS AND NEAR-MISSES

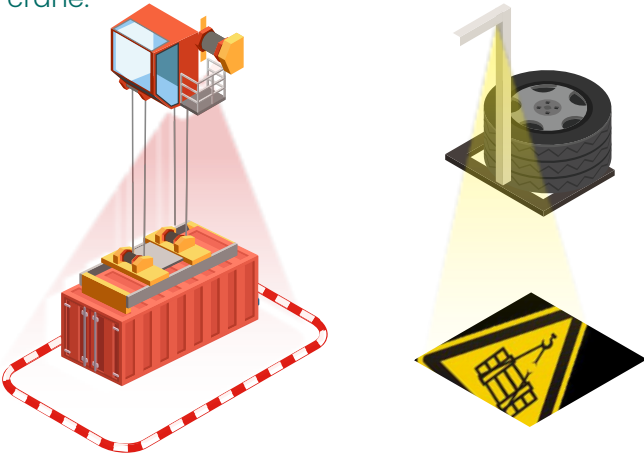
The safety symbol can either blink, pulse or shine non-stop. Smart activation eliminates operational blindness and reduces work accidents and near misses related to busy traffic.

LED floor marking technology is suitable for

marking

moving loads especially of the EOT cranes and Tire Transport Systems. A projected sign warns of

a motion and indicates a position of the hook/load personnel and other motorized traffic near the crane.



1-25 YEAR RETURN ON INVESTMENT

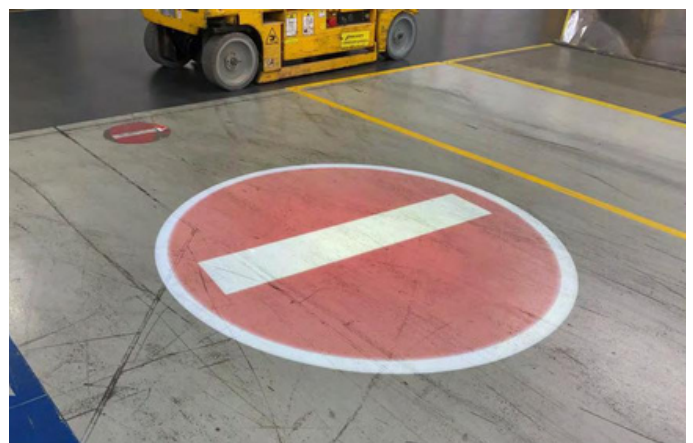
The LED projected sign can not be covered, overlaid, or destroyed by a movement of material handling equipment. **The ROI is in general 1-25 year.**



polyester laminated tape on the highly frequented place

INTEGRATION TO PARABOLIC MIRROR

The built-in LED projector into the parabolic mirror eliminates the disadvantage of the passive character. The LED projector is triggered by the motion of subjects involved in the intersection.



LED projected sign

innovative LED floor marking



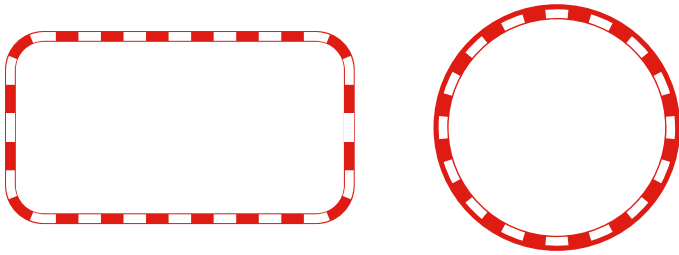
EXAMPLES OF USAGE

01

MOVING OBJECTS – INDUSTRIAL MARKING FOR EOT

CRANE

A projected sign warns of a motion and indicates a position of the hook/load to personnel and other motorized traffic near the crane. The size of the final illuminated symbol is set according to the size of the burden. The shape of the safety symbol can either be circular or rectangular - depending on the shape of the load. The projection of hazardous zone around the load can be visible only in case the crane is moving.

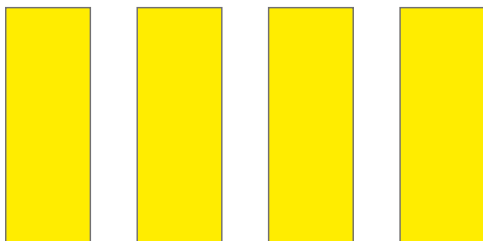


02

LARGE SYMBOLS – PEDESTRIAN

CROSSING

The wide portfolio offers large size symbols like „pedestrian crossing“ or symbols made from more than one sign. The size of the final symbol on the floor depends on the installation height of the projector. For example: 10 m installation height - 600 cm diameter of the symbol for 1 projector.

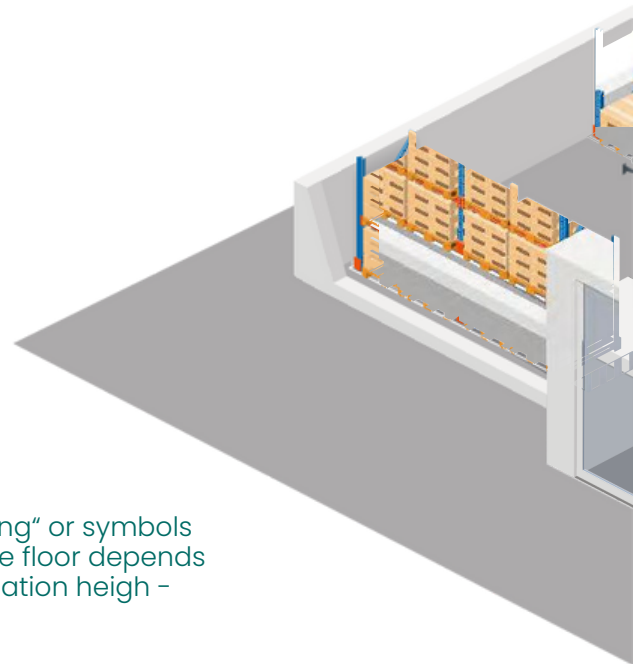


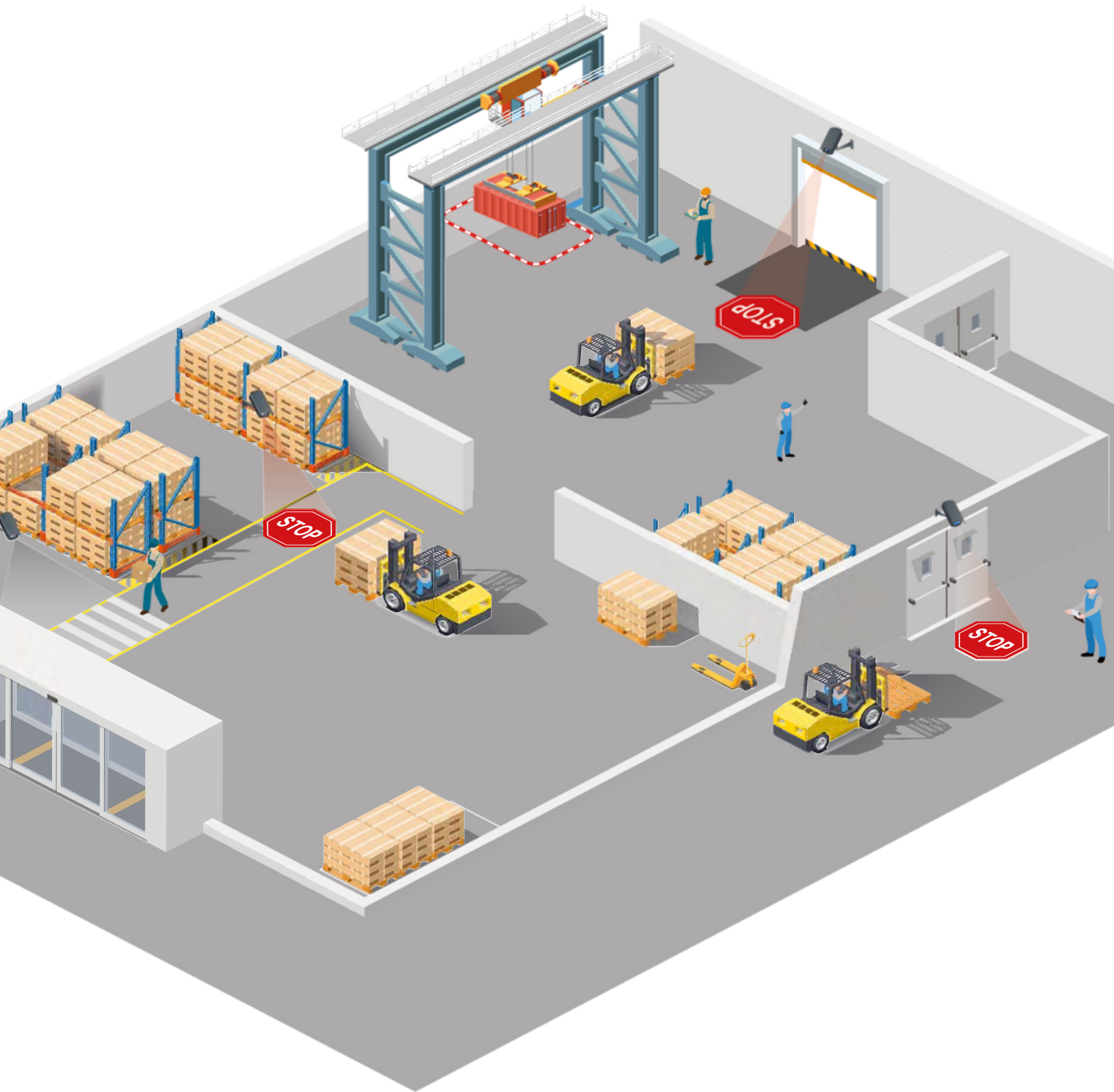
03

STANDARD ISO SYMBOLS OR CUSTOM

DESIGNS

All kinds of ISO standard symbols are available, even own custom design such as the company logo or the combination of standard symbols in one.

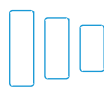




POSSIBLE FEATURES OF LED FLOOR MARKING



activation by a motion/movement



blinking or pulsing



non-stop shining (24/7)

anti- collision system



ACCIDENT-FREE WORKPLACE



outdoor/indoor use

- industrial design;
- use indoor/outdoor;



from fleet to fleet

- connectable to all electric MHE manufacturers;
- connectable to all kinds of MHE;



connected to floor marking

- activated by movement of the MHE;
- activated by movement of pedestrian;

USED TECHNOLOGY AND BASIC COMPONENTS

ULTRA WIDE BAND TECHNOLOGY

Solutions are built on UWB wireless technology (UWB). The UWB is the only reliable technology used for indoor use. In compare of other wireless technologies like Wi-Fi, BLE or GPS the UWB is the most precise one with accuracy up to 50 cm.

VEHICLE

TAG

Vehicle tag features 2 possible variants (Tab. A), based on the degree of compatibility with other system features. The selection of the suitable tag depends on the size of the fleet and required degree of safety.

FUNCTIONALITY	VEHICLE TAG	
	AWL-V-1	AWL-V-3
activation of electric devices	●	●
deceleration in zones		●
deceleration against		●

Tab. A

ZONE READER

The selection of the reading device (Tab. B) variant depends on the type of forklift tag and required functionalities.

FUNCTIONALITY	ZONE READER	
	AWR-03A	AWR-03B
activation of LED	●	
projector deceleration	●	●
in zones reacts to	●	

Tab. B

PERSONAL TAG

The personal tag is available as a wrist band in ATEX certified variant - suitable for explosive environments.

OPTOACOUSTIC SIGNALIZATION INSIDE A CABIN

The anti-collision system includes the signalization of a potential danger inside the vehicle cabine. A danger signal is available in two variants: A) immune button B) light beacon.

A) IMMUNE BUTTON



B) LIGHT BEACON



**less
accidents &
more efficient
hours**

TOYOTA

ON THIS SIDE!

EXAMPLES OF USAGE

01

FORKLIFT ANTI-COLLISION

SYSTEM

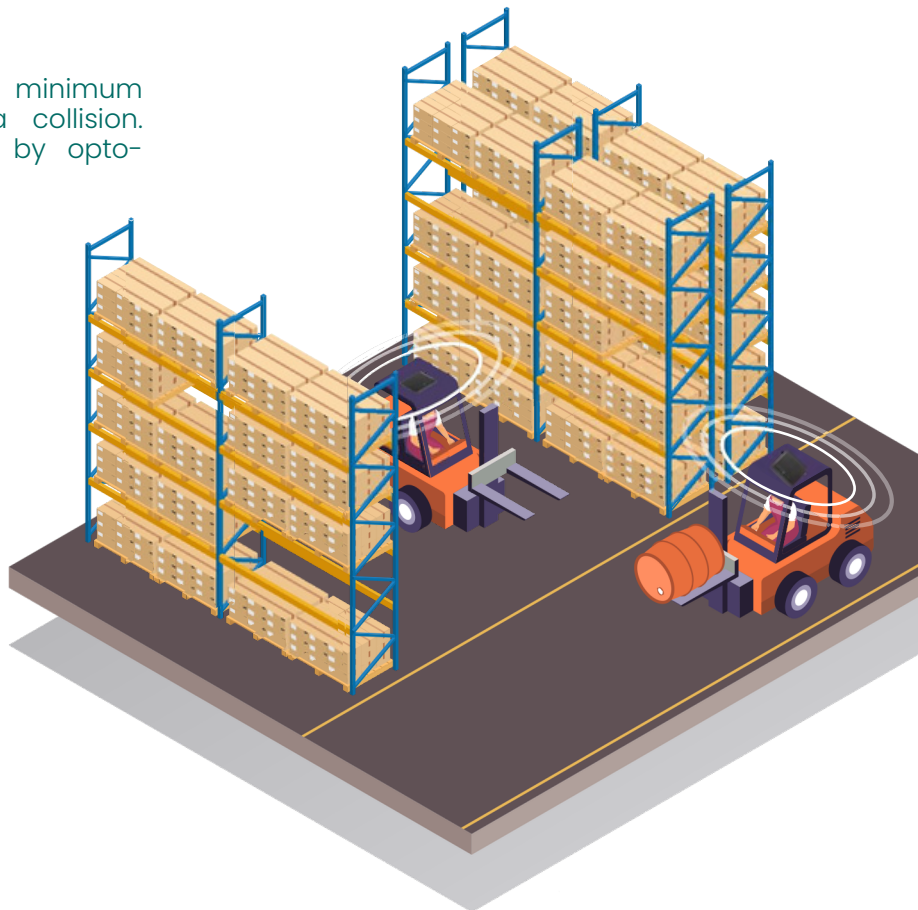
Autonomous deceleration of MHE to the minimum possible speed in order to prevent a collision. Notification to drivers inside the cabin by opto-acoustic signalization.



transferable
from fleet to
fleet



autonomous
speed
deceleration



02

PEDESTRIAN ANTI-COLLISION

SYSTEM

Autonomous reduction of speed of MHE when dangerously close to pedestrians. Active notification of pedestrians using personal tag to the drivers by using optoacoustic signalization inside the cabine.



pedestrian
interactive
protection



elimination of
operational
blindness

SMART FLOOR MARKING

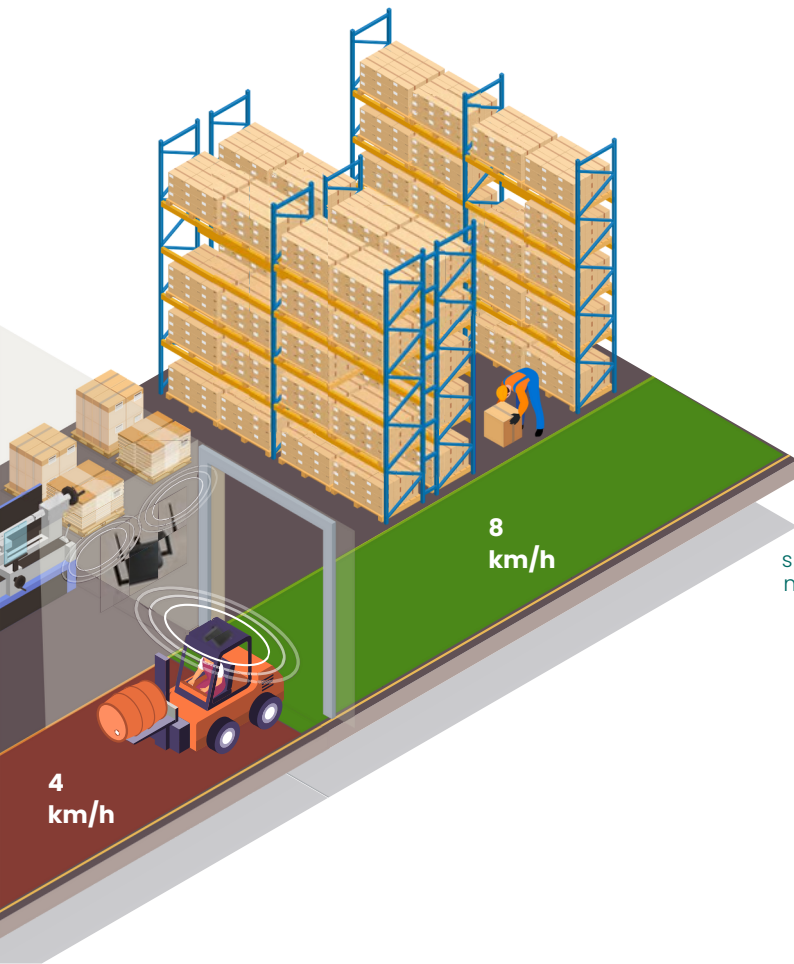
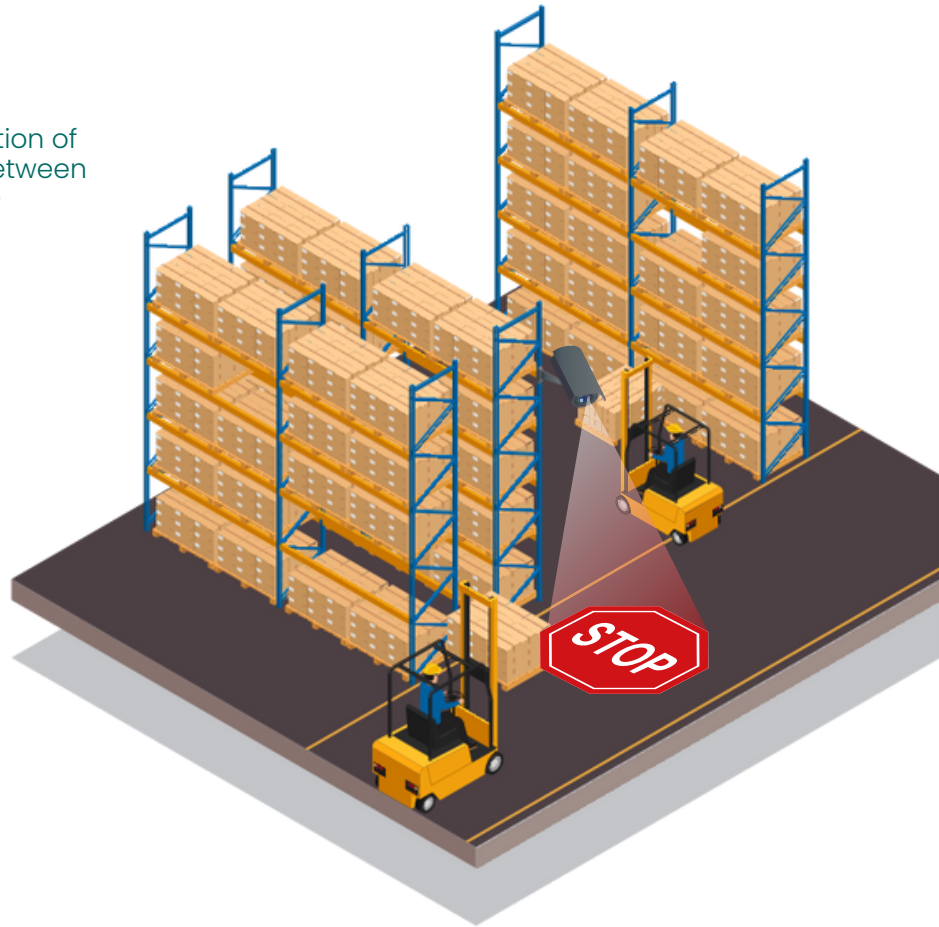
Projection of safety signs triggered by motion of MHE based on wireless communication between vehicle tag and the reading device on LED projector.



elimination of operational blindness



reduction of near misses



DECELERATION IN ZONES

Autonomous deceleration in zones based on the direction of movement to prevent collisions of MHE and pedestrians/other MHE in frequented spots (e.g. production).



speed deceleration to maximum predefined one



detection of travel direction

EXAMPLES OF USAGE

05

DECELERATION IN CRITICAL ZONE

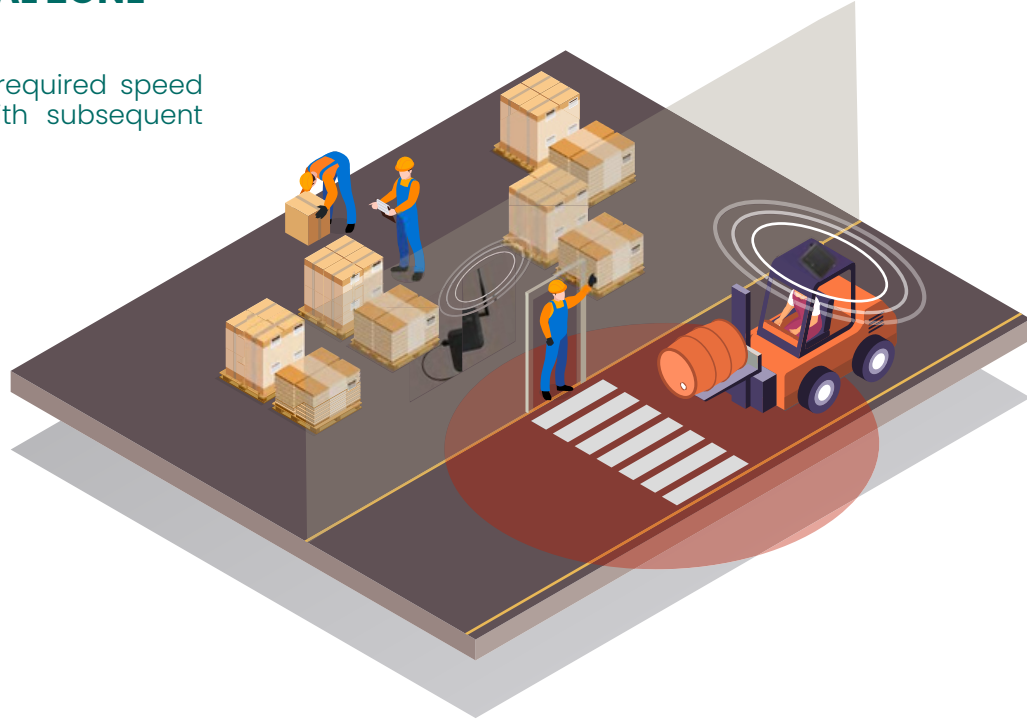
Autonomous deceleration to the required speed upon entering a critical zone with subsequent acceleration to the original speed.



speed presetting
in hazardous
zone



reduction
of near
misses



06

SAFETY ANTI-COLLISION

BAR

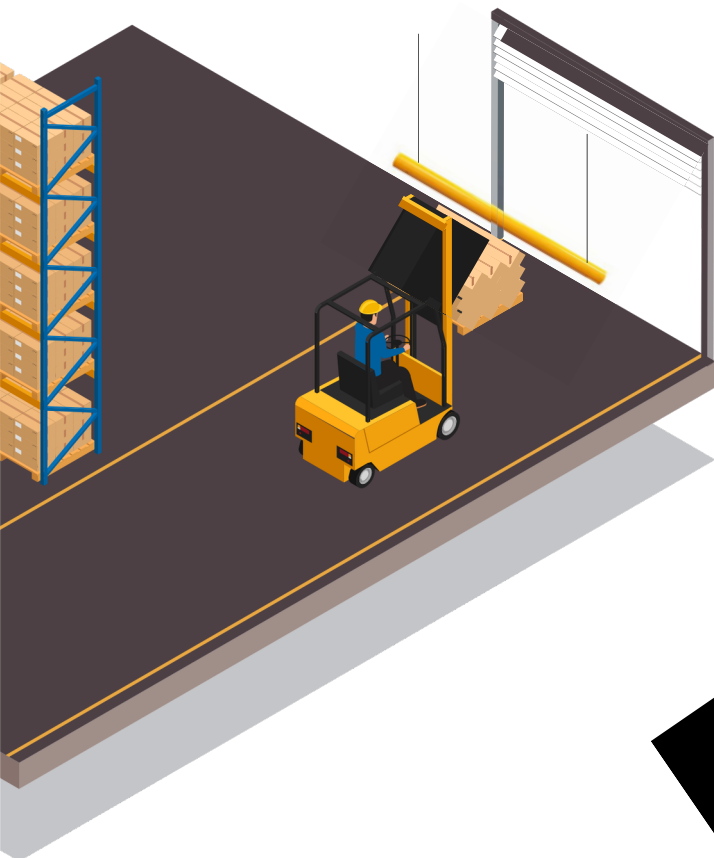
Timely interactive alert of excessively loaded cargo. The safety anti-collision bar is equipped with acoustic signalization by siren and LED light spots.



110 dB
lasting 7
sec



LED lights signaling
the potential of
collision



RAL 1021



140
mm

2 000
mm

CONNECTIVITY OF FEATURES

REQUIRED USAGE	TA			RAEDER	
	AWL-V-1	AWL-V-3	AWL-07-AS-03A	AWR-03B	AWR-03B
anti-collision of forklift vs forklift anti-collision of forklift vs pedestrian		●			
PJ activation by forklift motion	●	●		●	
PJ activation by pedestrian			●	●	
movement deceleration of forklift in a zone		●		●	●
complex anti-collision solution (all in one)		●	●	●	



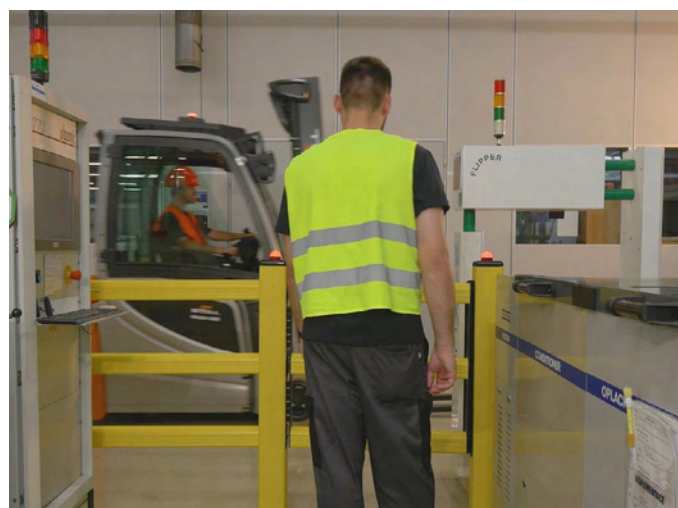
safe zone



warning zone - forklift autonomously decelerates, personal tag vibrates



warning zone - connectivity to LED floor marking (symbol changing)



danger zone - magnetic lock



Thank You!

Clarity Visual Management

T 01482 296451

W www.clarityvisualmanagement.com

E info@clarityvm.com

 ClarityVM

 Clarity | Lean and Visual Management



#MakingLeanWork

#LeanIt

#ClarityVM