No 98
Autumn 2022 | Vol. 33

Traffic Light REPORT

The magazine for traffic technology

COURAGE PAYS OFF

EDITORIAL

Dear readers,

my name is Stefan Biebl and I've been your RTB man in North America since 2020! The courageous step across the ocean has paid off, because here, too, the topic of accessibility is high on the agenda in many cities. And so it is not surprising that the many fields of application offered by LOC.id are also very popular.

This was also evident to a large extent at the ITS World Congress 2022 in Los Angeles, where I had the opportunity to speak with numerous interested parties. However, vehicle classification using TOPO was also of great interest. Easy mounting, the possibility of real-time transmission and the classification according to the 13 classes of the Federal Highway Administration (FHWA) put TOPO in the spotlight, because it means that even pick-ups and extra-long trucks are no problem.

Of course, we also deal with the issue of parking in the American market, because parking spaces are a scarce commodity, especially in metropolitan areas. So it's all the better that RTB has innovative solutions to offer in this area as well, such as the NOSCO balancing detection system, which uses artificial intelligence to provide reliable occupancy data.

But convince yourself! I hope you enjoy reading the new issue.

Yours

Stefan Biebl

We are looking for trainees, who step on the gas!
Electricity tamer
Mobility Designer
Creative Thinkers
000 and 111 understanders
Short process in a relaxed atmosphere

FACE THE SHORTAGE OF SKILLED WORKERS ACTIVELY

It's no longer a secret - many industries are affected by the shortage of skilled workers. And it is foreseeable that the situation will worsen in the near future. But what represents an extremely precarious situation for companies opens up completely new opportunities for many young people who would otherwise have a difficult start to their careers.

RTB is relying fully on its own junior staff and is pleased that all training positions could be filled again this year. And to ensure that this remains the case, the company is always active. Training fairs are attended, school classes invited and internships made possible. Success proves RTB right that it is on the right track, as the company has been able to build up three of its own assembly teams after the training. These teams do not only carry out the company's own work, but also assembly work for other companies.

Nevertheless, the company is always on the lookout for new ways to make young talents aware of RTB as an attractive employer. In this process, a mobile variant has been created. Under the motto „FOLLOW US", a historic airport pilot pick-up is used to transport the advertising message directly to where young people spend their time, e.g. in front of schools and leisure facilities. Because one thing is clear: We need young people today as the next generation of employees for tomorrow! So let's get to work!

ARE E-SCOOTER-PARKING SPACES THE *Solution*?

E-scooters are taking over the streets and have become an indispensable part of city centers. A recent article in the renowned Frankfurter Allgemeine Zeitung (FAZ), for example, proved that e-scooters have long been more than just „toys".

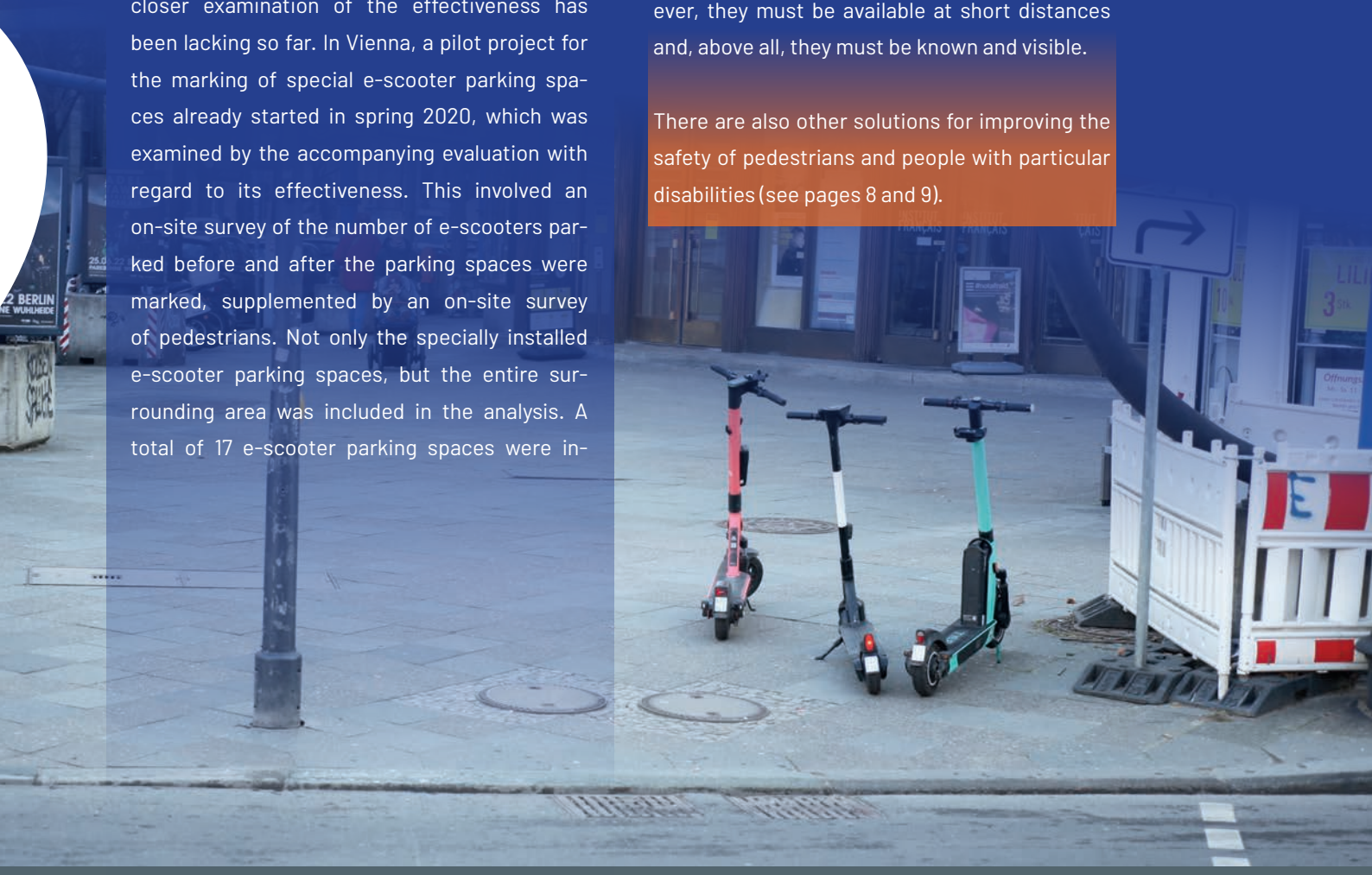
They are used as an important means of transport for the so-called „last mile", the route between the public transport stop and, for example, the place of residence. However, the increasing number unfortunately also leads to conflicts. This is because e-scooters are often parked on sidewalks or at public transport stops, contrary to the valid regulations. This creates tripping hazards and thus dangerous situations.

The Austrian capital Vienna has also dealt with the situation and asked itself whether e-scooter parking spaces could be the solution. Numerous large cities, including the cities of Cologne and Düsseldorf, but also metropolises such as Paris and London have already implemented appropriate parking spaces for e-scooters. But a closer examination of the effectiveness has been lacking so far. In Vienna, a pilot project for the marking of special e-scooter parking spaces already started in spring 2020, which was examined by the accompanying evaluation with regard to its effectiveness. This involved an on-site survey of the number of e-scooters parked before and after the parking spaces were marked, supplemented by an on-site survey of pedestrians. Not only the specially installed e-scooter parking spaces, but the entire surrounding area was included in the analysis. A total of 17 e-scooter parking spaces were installed and marked in Vienna. Comparing the number of e-scooters parked before and after the spaces were marked, positive trends in parking behavior can be observed.

On the one hand, fewer e-scooters were parked on sidewalks (36% after compared to 54% before marking), on the other hand, more bicycle parking facilities were used (29% after compared to 17% before). And at least 6% of the parked e-scooters were parked in a marked parking space.
(Source: Zeitschrift für Verkehrssicherheit 3.2022)

In the parallel survey, it was found out that the level of awareness of e-scooter parking spaces was not particularly high, but that they were definitely perceived positively. Another point that stood out was that parking in the designated parking areas is only accepted if they are in the immediate vicinity of personal destinations, a maximum of 50 meters away. In conclusion, e-scooter parking spaces can certainly help reduce the number of vehicles parked on sidewalks. However, they must be available at short distances and, above all, they must be known and visible.

There are also other solutions for improving the safety of pedestrians and people with particular disabilities (see pages 8 and 9).



99%

OUTDOORS OR IN PARKING GARAGES

LEARNED IS LEARNED – PARKING WITH ARTIFICIAL INTELLIGENCE.

RTB's hybrid system NOSCO combines three technologies at once to achieve a very high detection accuracy of up to 99% and thus optimally reflect parking space occupancy both in parking garages and outdoors.

The data is combined from camera and radar sensors installed at entrances/exits or on ramps in parking garages. Based on a neural network and by means of artificial intelligence (AI), these are fused, further processed, checked for plausibility and situations are learned. By combining the different sensor systems, a precise result can be achieved even in adverse conditions (dust, fog, snow, etc.).

In a balancing counting process, the NOSCO system determines the current occupancy situation and transmits it to the parking guidance system. Balancing means that the number of incoming and outgoing vehicles is considered on the basis of their movements and the number of free or occupied parking spaces is calculated from the balance of the two values. This system can be used whenever it can be positioned at all entrances and exits. It is important that there is no „sneak path" through which a car can leave from time to time without passing the system. This causes inaccuracies that add up with each additional vehicle. To prevent this situation, a daily reset is recommended. This can be done very quickly and easily via app or standardized via a setting in the software.

NOSCO is suitable for use in the following situations:

- Parking garages that do not have 24/7 operation.
- Parking garages where a (nearly) daily reset is possible
- Parking garages or parking areas where no single space sensors can be installed
- Parking areas where counting by means of barrier, induction loop or light barrier is too inaccurate
- Open parking spaces without exact parking space marking

There was a great of development effort being invested in accuracy and AI to ensure that the NOSCO system is self-learning getting better and better. It is also designed to be able to detect different situations in the long term. For example, the scenarios „meeting traffic", „parallel traffic" and „passing stopped vehicles" are already possible. And the next targets have already been set: The detection of pedestrian flows and bicycle movements.

Have we aroused your interest? We would be happy to advise you on site!

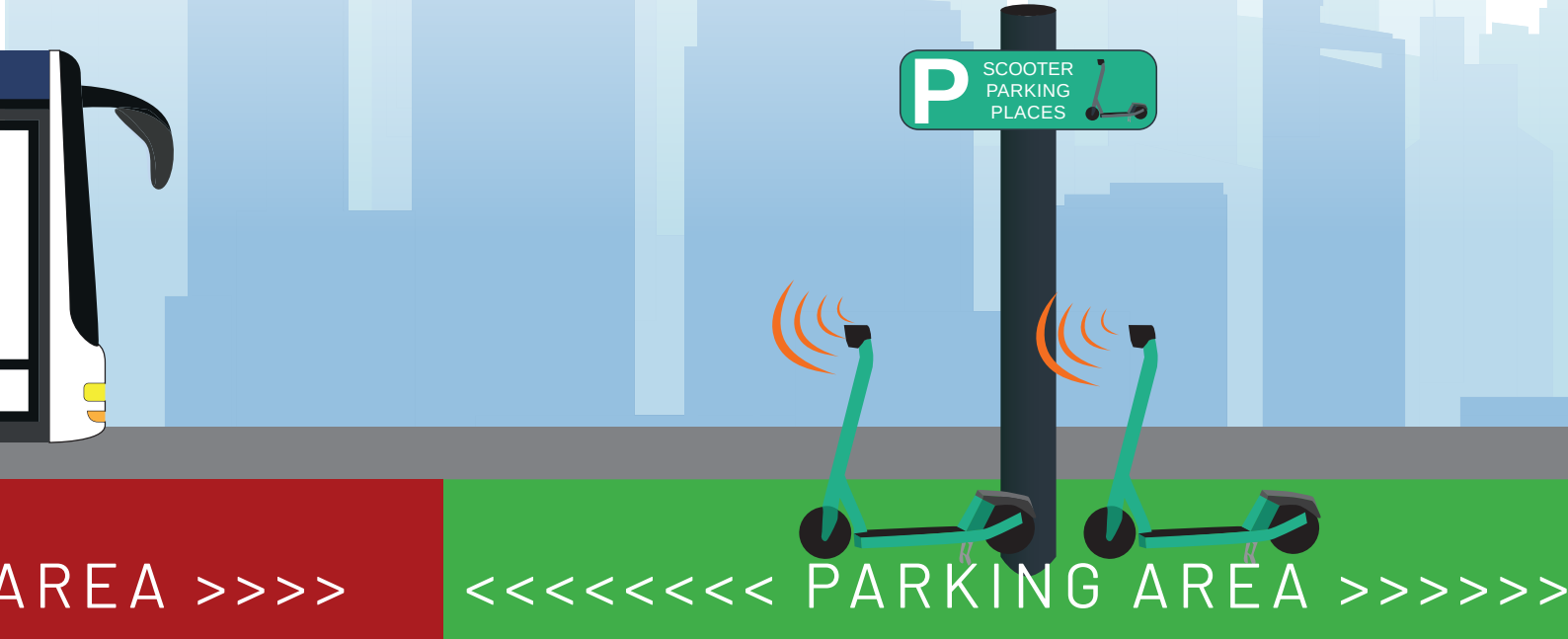
THE COMBINATION DOES IT:
Accessibility and e-scooter barrier

If you take a closer look at the situations in which e-scooter journeys take place, you will see that around 40% of all journeys are used as a link to local public transport (ÖPNV). This, in turn, is also needed by particularly impaired persons, such as the blind or visually impaired. That is why good cooperation is indispensable at this point.

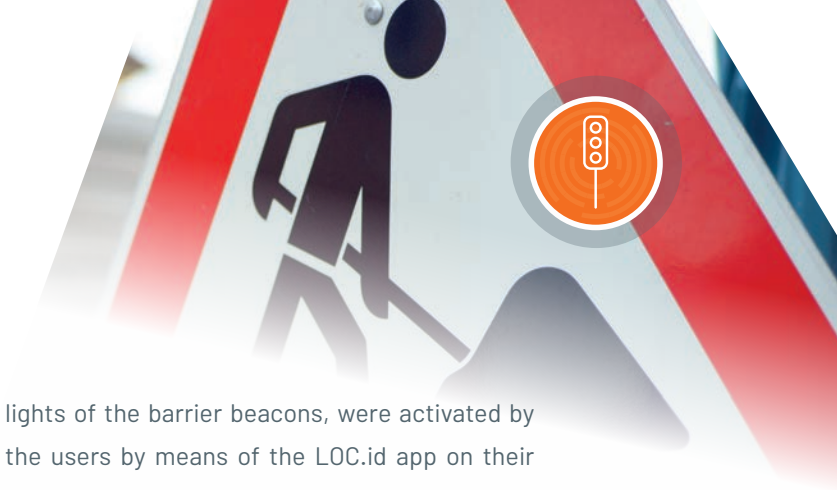
E-scooters are already tracked via GPS signals, as this data is also used for billing purposes. However, there are sometimes considerable variations in the accuracy of GPS signals. But other technologies, especially in the area of e-scooter billing, combined with security, enable entirely new options.

RTB and e-scooter operator Bolt have developed an idea in which e-scooters can be billed at the end of the ride only if they have been parked in such a way that they do not pose an obstacle. The system is based on already installed acoustic units for blind and visually impaired people, which are also equipped with LOC.id technology. These are usually installed, for example, at public trans-

port stops, at entrances to public buildings or in front of stairways to ensure safe access. And ideally, no e-scooters should be parked there. For this reason, these areas can be designated as restricted areas and technically stored in the system as such. If someone nevertheless tries to park an e-scooter that is also equipped with LOC.id technology in such an area, the system recognizes this irregular action and the e-scooter usage cannot be completed or billing cannot take place. Only when the vehicle is properly parked outside the restricted area, the billing process is allowed. In this way, the e-scooter users are made aware of the restricted areas and the respective situation and, in the spirit of good cooperation, are made to park in accordance with the rules. And for blind and visually impaired people, safe access in public areas is ensured. LOC.id makes it possible!



FOLLOW THE DETOUR – but



Construction sites in the area of sidewalks, where the roadway must also be used as a detour, often present difficulties for pedestrians. But how must people with visual impairments feel when they have to leave the safe path?

It's really good that there are now technical solutions to help them find their way safely through construction sites. LOC.id is once again the key to safe guidance. The city of Osnabrück, which describes itself as a digital pioneer, has equipped an initial test construction site with the system. This was put into operation on Osnabrück's Neumarkt at the beginning of July, and in the meantime there has been a great deal of feedback from Osnabrück's blind and visually impaired scene. In addition, there have been many personal discussions and site visits with those affected and experts. Passing the site by means of the acoustic guidance system was intuitive and easy in all tests carried out. The acoustics, which are integrated into the warning lights of the barrier beacons, were activated by the users by means of the LOC.id app on their smartphone. A time-delayed signal from each of the two warning beacons makes it easy to locate the entrance to the detour. Furthermore, it was suggested to integrate a tactile guidance in addition to the acoustic guidance. This would ensure a two-sense guidance, acoustic and tactile.

It can be stated that the installation of the first digital test site has been a complete success so far, and it shows how well accessibility can be implemented through smart solutions. In the meantime, a separate working group has been established under the leadership of the renowned company FABEMA, where numerous companies have come together to find further technical solutions for construction site areas. There is still a lot to do and LOC.id is one building block to simplify mobility for people with impairments and thus enable safe participation in social life.

t safely!

RTB IN LOS ANGELES

The discussions in a relaxed atmosphere at the ITS World Congress in Los Angeles show how important accessibility is, also on the American market. RTB was able to score points with LOC.id, push buttons and acoustics in particular, but vehicle classification also attracted numerous interested parties to the RTB stand. We are already looking forward to many more contacts and ideas!

LOS ANGELES
ITS WORLD CONGRESS 2022

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