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Bus Design & Interiors

Palfinger Passenger Lifts

A More Cost-Effective Strategy to Improve Accessibility

The accessibility of bus and tram travel can be dramatically improved without the need for expensive infrastructure projects, notes Philipp Gerkmann, Head of Business Unit at Palfinger Passenger Lifts.

Public transport authorities have made great efforts in recent years to cut down physical barriers for people with reduced mobility like wheelchair users in order to improve access to bus and tram travel. This is often spurred on by new regulations and legislation aimed to foster inclusion in daily travel.

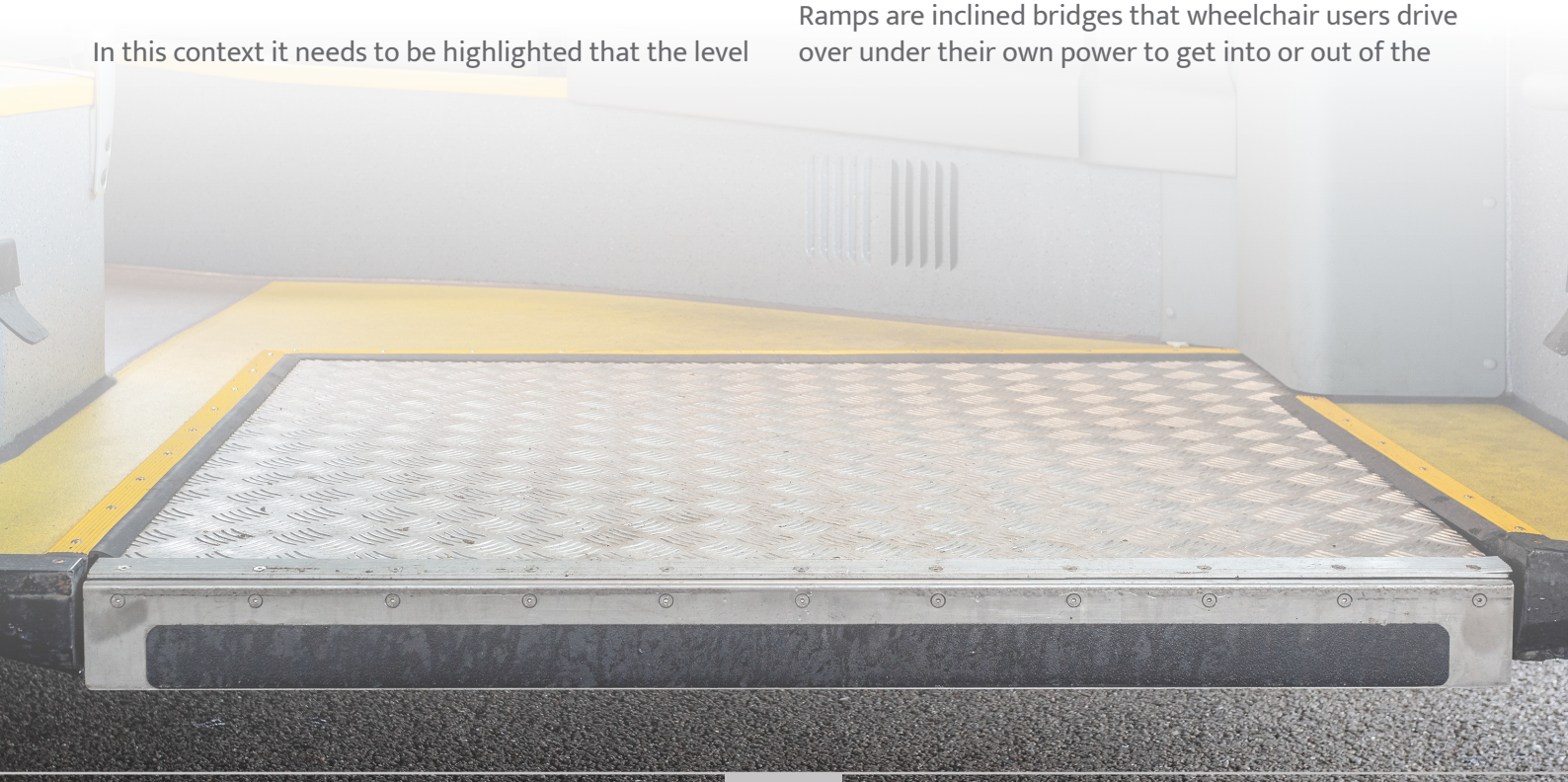
Many of these appeared in the 2000s, some even setting deadlines for full accessibility on public transport systems. In France this was 2015, in the UK 2020 and in Germany 2022, but while progress is being made, we as a society are still far from providing universal accessibility to bus and tram travel.

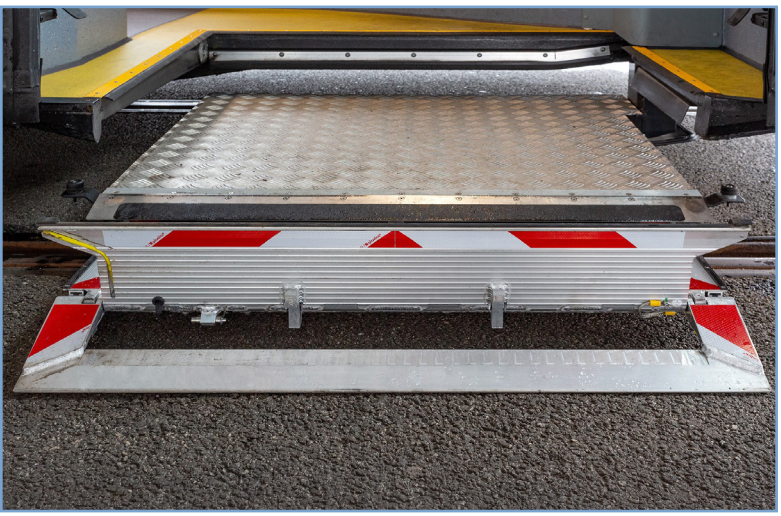
In this context it needs to be highlighted that the level of accessibility currently in place varies significantly depending on the country and region, with larger cities faring much better than more rural areas. But while there are ongoing efforts to improve accessibility, it is estimated that in Germany alone, less than half of all bus and tram stops currently have barrier-free entrances.

Today many public transport authorities view complete accessibility as unrealistic, due to high investment costs and lack of personnel for the numerous construction projects required to make all bus and tram stops barrier-free. However, there is a simpler, more cost-efficient solution they can implement to improve customer accessibility: installing vehicle-bound passenger lifts and ramps integrated into vehicles' door areas.

Vehicle-Bound Ramps

Ramps are inclined bridges that wheelchair users drive over under their own power to get into or out of the





vehicle and can be manually or electrically extendable. Manual folding ramps are particularly inexpensive to equip, but are increasingly impractical in everyday passenger operations, as drivers have to leave their cabs to operate them.

A more practical solution is an electric ramp, which can be operated from the driver's cab. However, with either type of ramp, it should be noted that a bridging angle of 6.7° to the floor line must not be exceeded otherwise the ramp is too steep for wheelchair users and there's a risk of tipping backwards.

Therefore, at stops with greater height discrepancies, ramps can paradoxically become barriers themselves.

Bus and Tram Lifts

This issue can be avoided using lifting platforms: these systems are integrated into the vehicle floor of the door area by means of a column or cassette. Due to this wheelchair users can be transported vertically from the level of the ground to the level of the vehicle floor.

Once a person is on the lift platform, automatic roll-off safety devices activate, and the platform raises to vehicle floor level. The wheelchair user can also exit the vehicle in the reverse order.

As the platform does not change its horizontal position during the lifting process, it is possible to ascend at a small angle and bridge level differences of up to 300mm. A lift is also always operated from the driver's platform and, together with camera monitoring, provides a safe solution for wheelchair users and vehicle operators.

Saving Costs while Improving Accessibility

Like any technical system, ramps and lifts are subject to maintenance requirements that must be taken into account in the life-cycle costs of a vehicle. Overall, however, purchasing costs and maintenance of these systems will be significantly lower than a line-specific conversion of several stops. This is especially beneficial for stops that are difficult or impossible to modify structurally, such as those in landmarked historic city centres or in rural areas.

Palfinger Passenger Lifts

Palfinger, with over 30 years' experience in the transport industry, offers customised lift and ramp solutions. Our factory near Bremen, Germany, has produced more than 7,500 ramps and 2,400 medilifts for clients including Siemens, Hess, Daimler, Skoda, Solaris, Irizar and Alstom.

Two of our key products are the **Medilift LB 300 Column Lift for buses** and the Medilift CL 300 Cassette Lift for trams. These fully automatic electric lifts are designed for low-floor vehicles, providing comfortable entry and exit for wheelchair users from kerb or floor level. Safety features include automatic roll stops, safety markings, anti-slip surfaces and integration into the vehicle's safety circuit.

If you want to see these systems in operation, you can do so in cities such as Bremen or Munich, where this strategy for meeting accessibility regulations is already being implemented on tram lines and individual bus routes. For those further afield, you can also watch the **LB 300 Column Lift in action online at Bus-News**.

Want to Know More About Palfinger's Lifting Solutions?

For further information on our lifts and ramps, please visit our **website** or **contact our sales and service representatives**.

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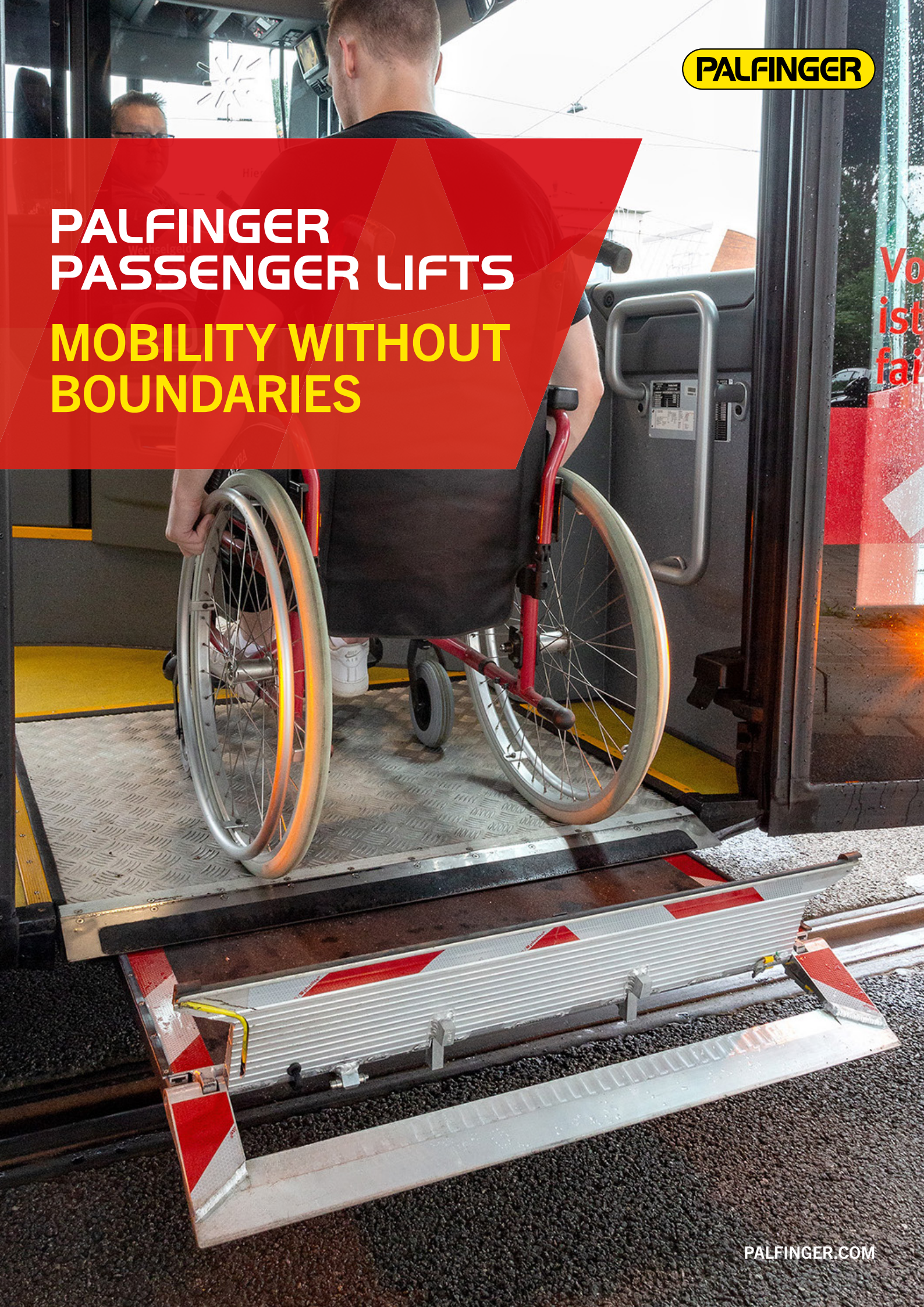

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