

You are shaping the transport of the future
We are ensuring reliable connections
Let's connect.

Transportation



Weidmüller 

What impacts will urbanisation have on transport engineering in a globalised world?





Inhabitant numbers for selected cities worldwide in 2010 and forecast for 2030 (in millions)

Source: statista.com; Wendell Cox Consultancy

Traffic volumes are continuing to rise

Efficient mobility concepts are becoming indispensable

Both long-distance and regional travel are increasing as a result of advancing globalisation and growth in the size of towns and cities. Overcrowding in conurbations and the emergence of modern megacities will result in far-reaching changes to transport. As well as massive increases in capacity, consideration must also be given to how a very routine-based transport infrastructure can be complemented by individual, needs-based concepts. However, the main question is how the need for mobility can be met with sustainable use of power, climate and resources.

Reliable and highly automated rail vehicles have a central role to play in a modern and efficient transport system that is fit for the future. The challenges here are to provide an intact infrastructure and to manage complex systems. The requirements made of transport engineering are therefore growing all the time. Even the tiniest of interrupts has major consequences in the system. In this context, alongside the transfer of energy, communication between the system components is increasingly important.



How will transport engineering change in the long term?



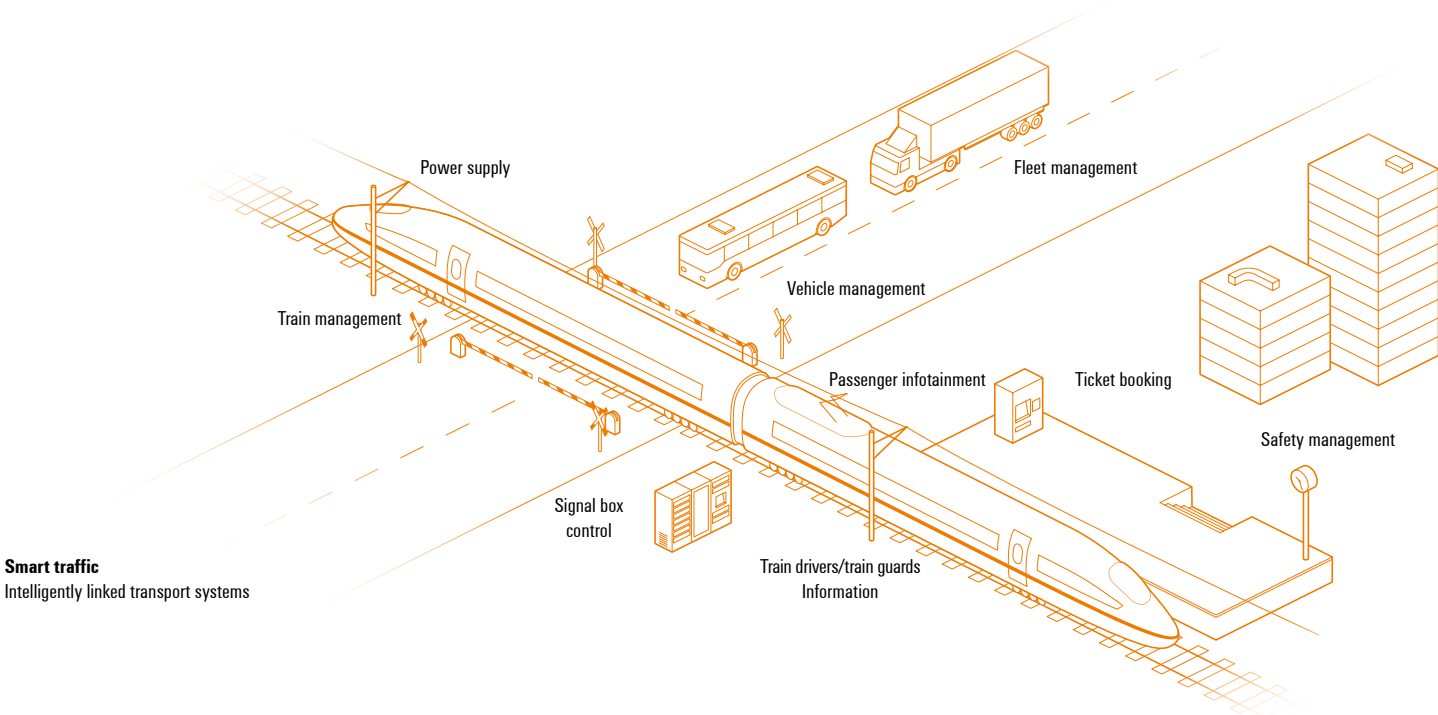
The transport systems of megacities are like highly complex watches

Operating reliability is a key factor

Modern mobility concepts are expected to offer increased efficiency, range and safety – coupled with a high level of automation. The goal is smart traffic. Intelligently linked transport systems merge into an integrated system of sustainable mobility. The approach is to improve flexibility and speed

and reduce downtimes and maintenance times. This requires reliable electronic components for flexible power distribution, smooth operation and reliable track safety. Modern rail vehicles need to be equipped with failsafe components and electronic modules which are resistant

to extreme environmental influences such as vibration, shock and fluctuations in temperature and climate, require little maintenance and have long lives. Manufacturers of innovative transport engineering are one step ahead of the market.



Going forwards together: Weidmüller – the competent partner for transport engineering





Opportunities are arising in new markets

Optimised interfaces are improving competitiveness

Weidmüller and the rail industry – a global cooperation for meeting mobility needs through innovative and customised solutions: boosted by more stringent mobility, comfort, speed and cost requirements, the number of modular electronic systems is on the rise. Rail vehicles, stationary systems like signal boxes or signalling equipment – Weidmüller offers reliable and safe connections for a multitude of system components in the rail industry. And they guarantee excellent functional reliability even under adverse conditions. In all climate zones. Around the globe.



**The big picture:
excellent support through
integrated solutions**



Solutions for transport engineering

Distributing and processing signals, reducing risks

Increasing standards in monitoring and the capture of operating data in transport engineering have a knock-on effect for signal transmission and data communication. Weidmüller has successfully taken on this challenge. For years, we have been cooperating around the globe with leading rail manufacturers and supplying

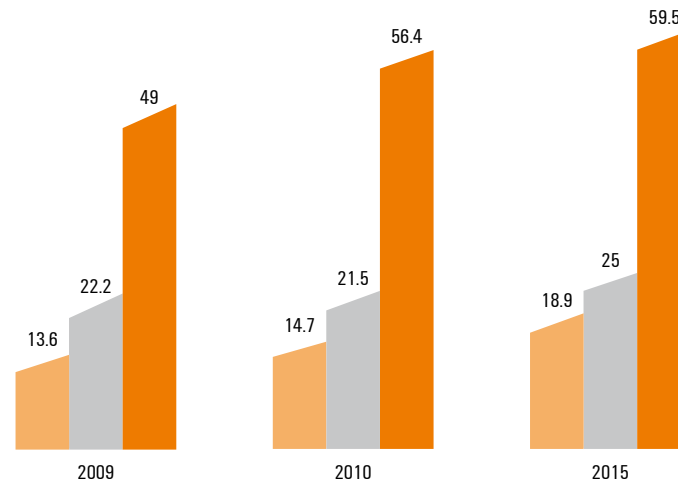
innovative and customised solutions. Our diverse, industry-specific range of solutions for distributing and processing signals helps operators to evaluate and reduce potential risks. High-speed trains, trams, underground systems and locomotives – they all travel safely with electrical connection technology from

Weidmüller, for example, failsafe components and modules tailored specifically to the rail infrastructure which offer impressively long service lives, high levels of automation and little need for maintenance. Alongside our products, we are also happy to share our specialist knowledge at any time.

Global market volume for rail technology by region between 2009 and 2015 (in billion euros)

- Europe/Middle East/Africa
- Asia/Australia
- North/South America

Source: statista.com; Siemens; UNIFE



**Stay safe and secure on the rails:
our connections will ensure
you are on track for success**





Quality range for the railway industry

Innovative platform concepts for a wide range of vehicle types

Railway vehicles and railway infrastructure face extreme environmental influences. This places particular requirements on the functional safety of mechanical and electrotechnical components. Added to this is the fact that increasing calls for comfortable and intelligent means of transport are also ramping up the requirements for various applications and components both inside and outside of rail vehicles. For example, depending on the route and passenger volumes, high-speed trains run with 3 or 12 carriages at different times. In order to ensure that this process is carried out with flexibility as well as the required degree of safety, practical connection solutions are needed at carriage interchanges.

For decades, Weidmüller has been supplying efficient pluggable interfaces for secure power distribution in transport systems. For example, we have developed a solution for carriage interchanges which combines robust hard wiring to the carriage interior with a pluggable transfer between the carriages. Our sturdy RockStar® HighPower plug connector was developed especially for the tough requirements encountered in transport engineering.

We are your partner for reliable connections as you progress towards the transport of the future. Let's connect.



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