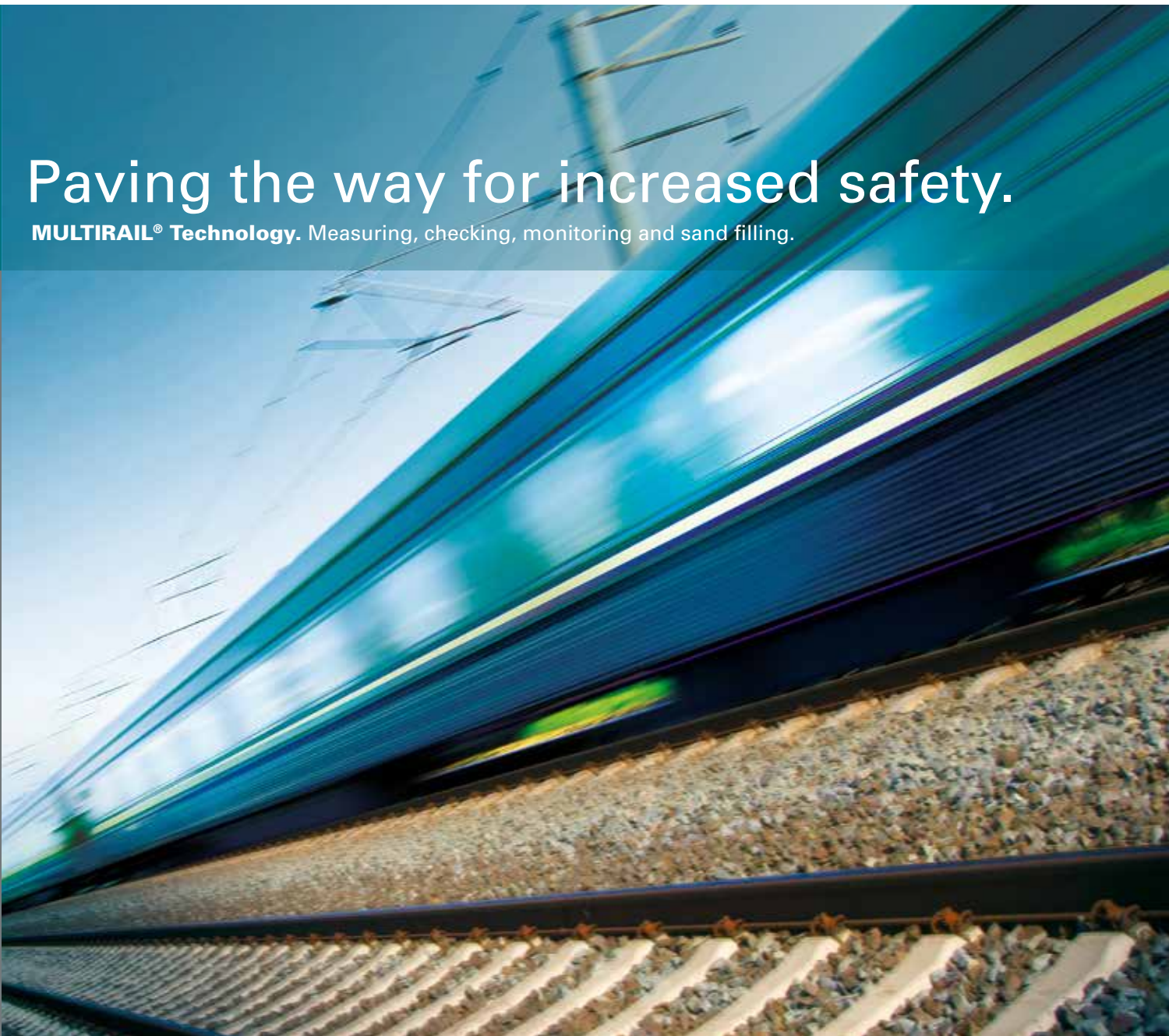


we make  
processes  
work



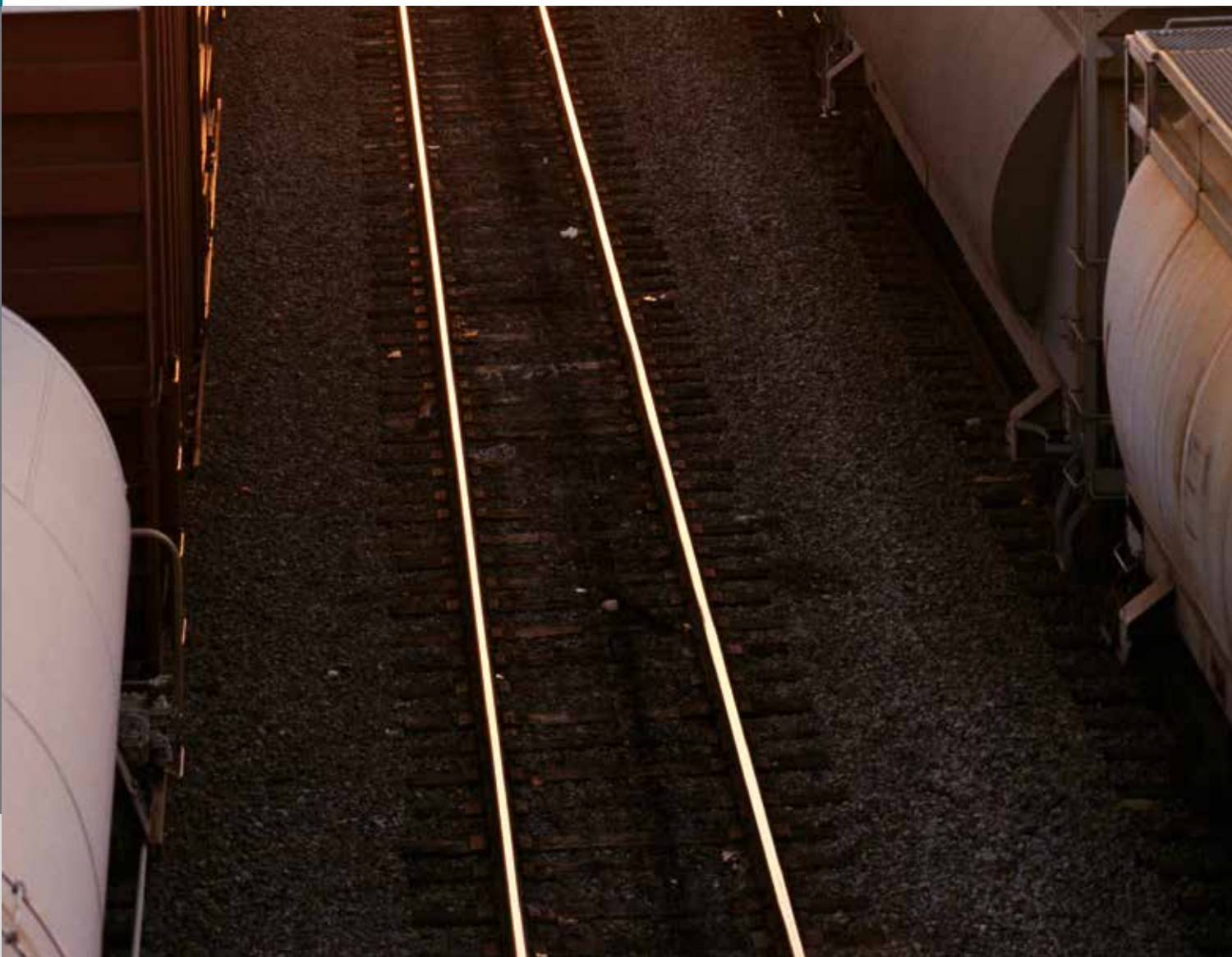
Paving the way for increased safety.

**MULTIRAIL® Technology.** Measuring, checking, monitoring and sand filling.





A sign of our times: more and more people and materials need to reach their destinations faster than ever before. Schenck Process MULTIRAIL® helps you do just that.





As our world becomes ever more interconnected, we increasingly need to be mobile and to transport goods. As the world population grows, we need more and more affordable and safe means of transport. Mine owners and production companies the world over are competing for transport corridors planned to the minute in a limited rail network with ever longer and ever heavier trains. Individual transport by car and plane have long reached the limits of their capacity and economic viability in many places. New high-speed routes and underground systems are therefore being planned or already being constructed all around the globe. Not only does this place greater demands on passenger and freight transport, but also on the safety and reliability of the technology, which can only be met through precise measurements, monitoring, checks and settings. Our contribution is: MULTIRAIL® Technology.



And what's more, MULTIRAIL® APC can perfectly record and evaluate flows of people, enabling transport companies to make better plans.



Weighing liquids during travel?

Because we know that time's money, we've simplified things. With MULTIRAIL<sup>®</sup> LiquidWeight.



And what's more, for 100 ton wagons travelling at a speed of 3–7 km/h, the deviation is just  $\pm 200$  kg.

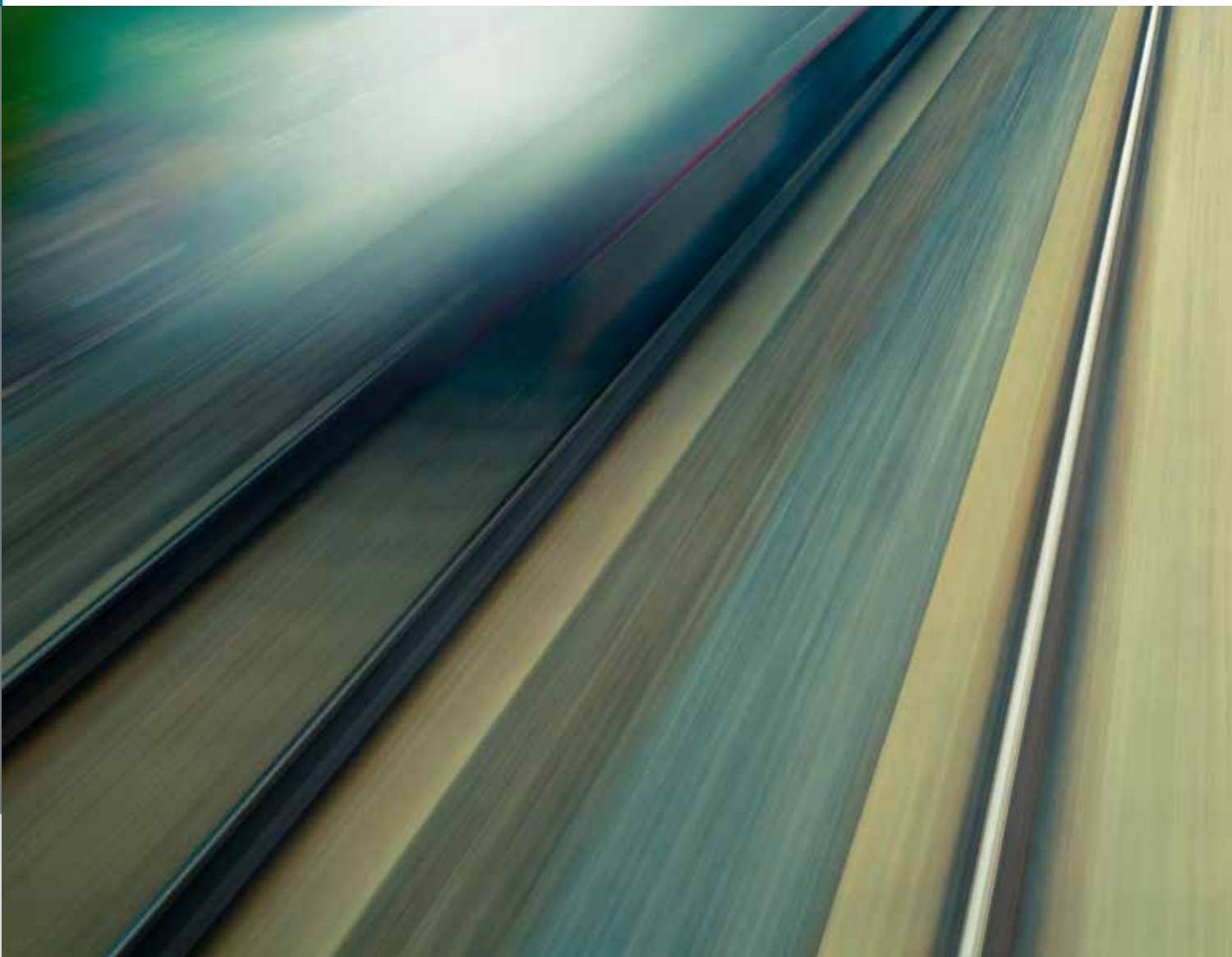


Time's money – especially when loading precious liquids into tank wagons. When they leave the factory, they need to be weighed in a highly accurate and legal-for-trade manner. We are finally seeing an end to the practice of trains having to remain stationary until the liquid is no longer swashing around and the wagons having to be accurately parked on the scales and decoupled. With MULTIRAIL® LiquidWeight, the train set can be easily weighed while travelling at a slow speed without the need to stop. The legal-for-trade weights of all wagons automatically appear on the operator's screen around one minute after weighing. It goes without saying that the process complies with OIML R 106-1 and saves both time and staffing resources. Not to mention the simple way in which the weighing technology is fitted without any gaps or foundations.





Wheel diagnosis at 250 km/h!  
Essential as we don't leave  
safety to chance.





Rail track operators want to know the weight of trains travelling on their track, and the owners of rail vehicles need to know if their trains are running unevenly. Such information is crucial to optimised maintenance intervals and rail transport safety, as heavily overloaded wagons or a wheel flat caused by a brake defect bring with them huge potential for derailment, that needs to be detected and corrected in good time. Optimised travel also improves comfort levels and reduces noise. The MULTIRAIL® WheelScan and MULTIRAIL® InterScan dynamic force measuring devices additionally calculate the load distribution of every single wagon and dynamic peaks in load as an indication of wheel damage, even at high speed and without affecting transport speed. Both solutions are approved by EBA, DB, Trafikverket and RENFE.



And what's more, MULTIRAIL® WheelScan has a measurement uncertainty of just  $\pm 2\%$ , even at train speeds of 60 km/h.



Zero tolerance to loading mistakes!  
We know that accuracy is paramount here,  
often more so than in other situations.







When mine operators in Australia need to load train sets with 5 locomotives, 234 wagons and a length of almost 3 km for transport to the port, each wagon has to be precisely loaded – not too light and not too heavy. MULTIRAIL® TrainLoadOut plays a decisive role in achieving this optimum with high levels of reproducibility regardless of the weather and product characteristics. We automatically weigh each wagon before and after loading and can immediately optimise its load depending on the results. This also benefits the port, which can fully rely on the incoming train set, accurately loaded to the target value. Our devices are used anywhere, not just in Australia but also in South America. A large amount of the ore mined by global companies is weighed and loaded using Schenck Process technology.





If you start with nothing, you end up with nothing. Quiet, comfortable and low-wear rolling stock is the result of hard work in vehicle construction and in the maintenance workshop – and our hard work too.

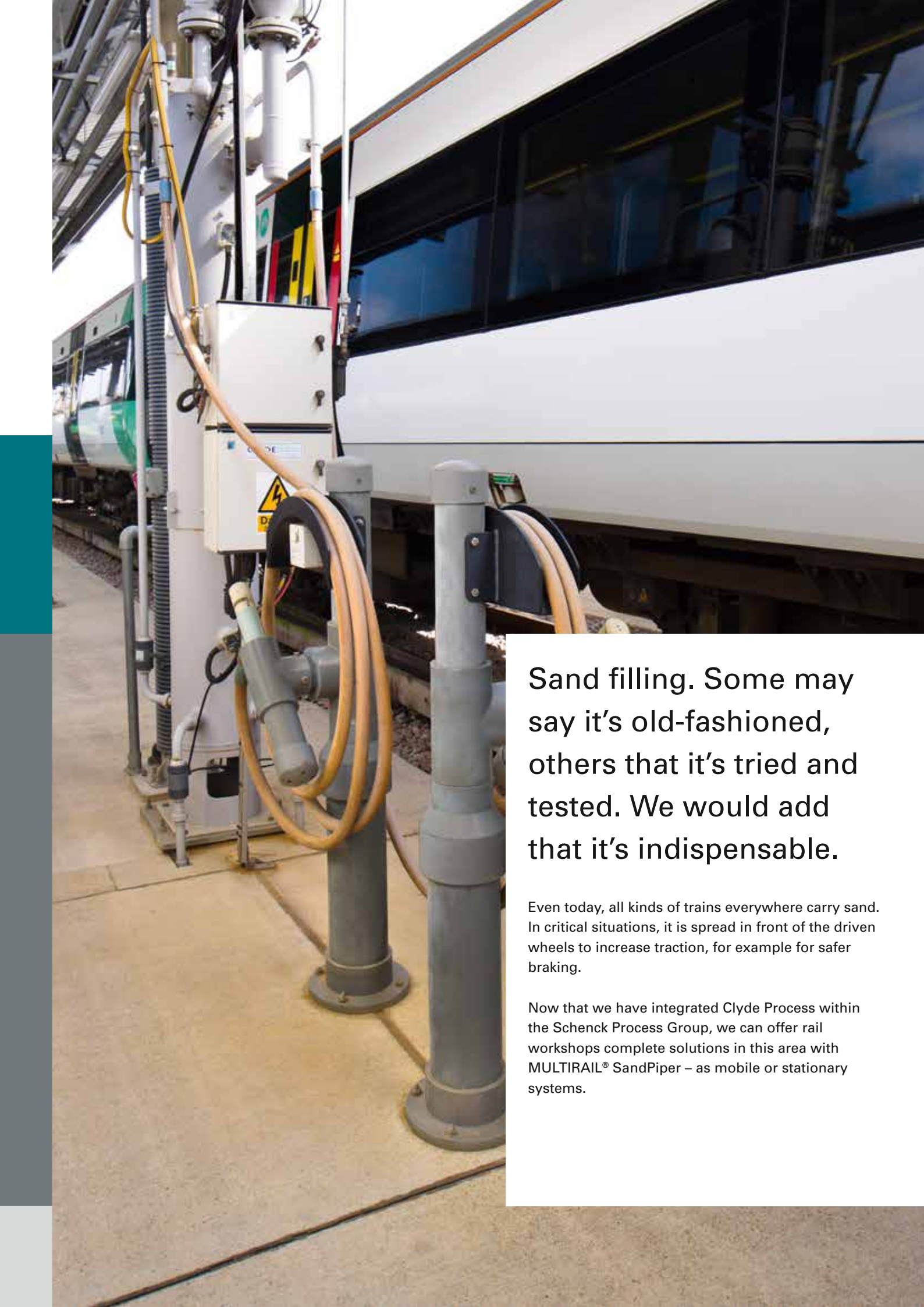




Precision is needed in the workshops to ensure that trains can run quickly and safely with minimum wear. Here bogies and rail car bodies are measured, adjusted and thereby optimised under simulated load conditions, both when originally built and when undergoing maintenance.

Schenck Process of course handles all the major technical work involved in measuring force and geometry. From adjusting the bogies with MULTIRAIL® BogieLoad and adjusting the rail car bodies with MULTIRAIL® CornerLoad to final checks on the distribution of load after assembly with MULTIRAIL® WheelLoad, we provide all the necessary know-how and well-proven products to the market.





Sand filling. Some may say it's old-fashioned, others that it's tried and tested. We would add that it's indispensable.

Even today, all kinds of trains everywhere carry sand. In critical situations, it is spread in front of the driven wheels to increase traction, for example for safer braking.

Now that we have integrated Clyde Process within the Schenck Process Group, we can offer rail workshops complete solutions in this area with MULTIRAIL® SandPiper – as mobile or stationary systems.

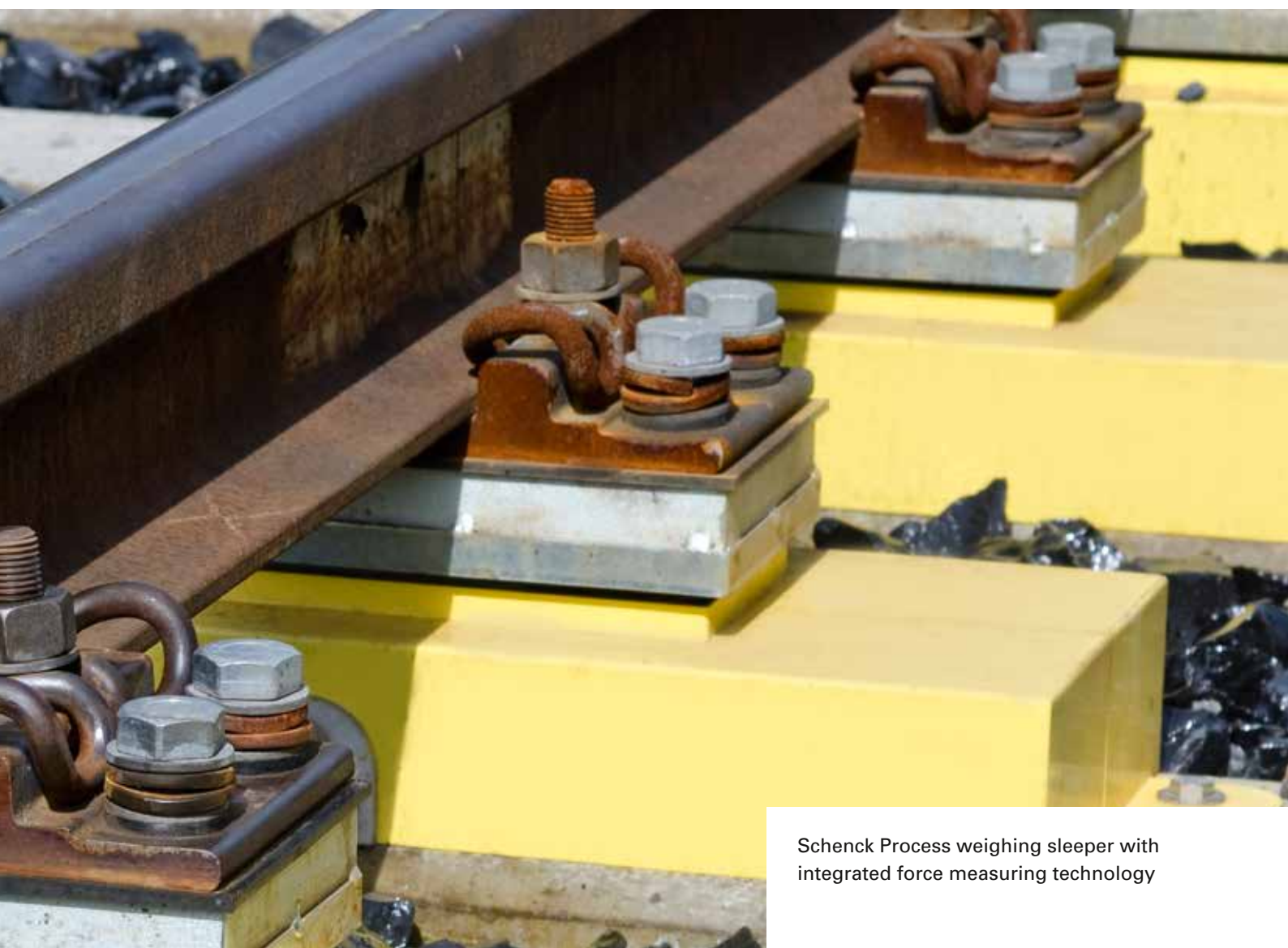
# Schenck Process MULTIRAIL® rail products.

## Our drive, and what is behind it.

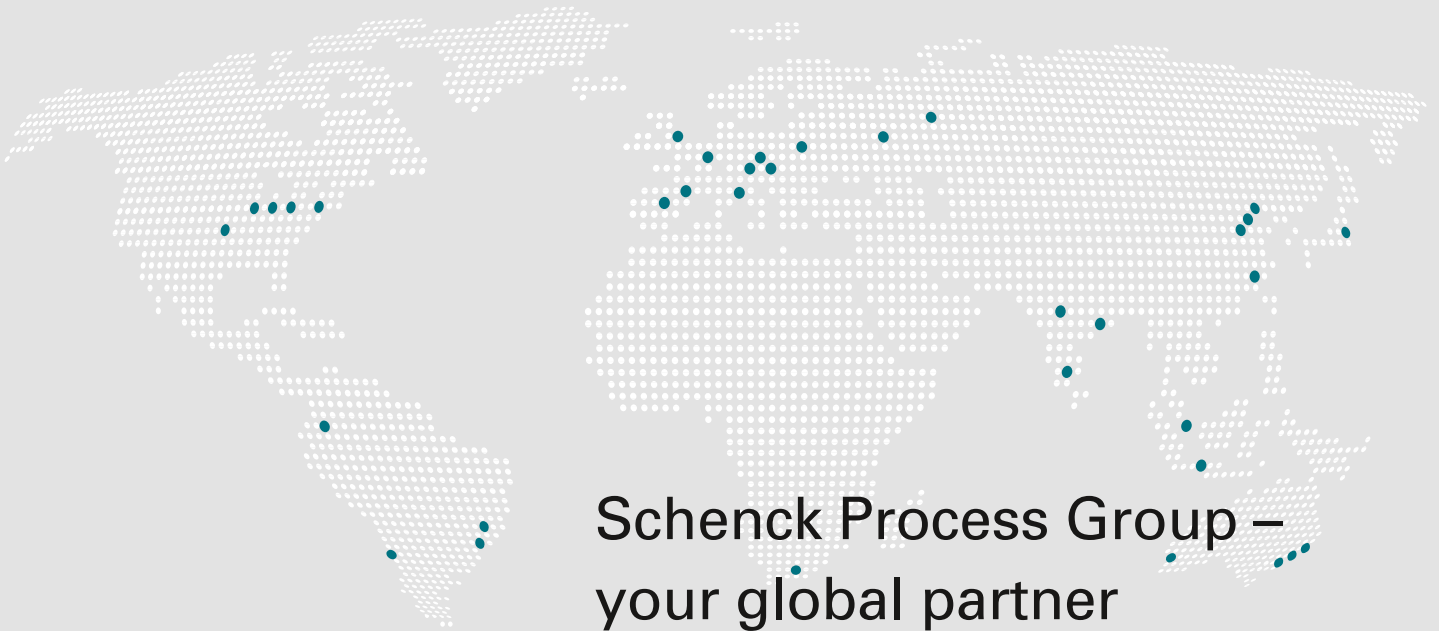
Schenck Process has developed special load cells for different, high-precision industrial applications. Virtually all the weighing technology solutions of the MULTIRAIL® family are based on well-engineered and virtually invisible force measuring technology integrated in the sleepers which stably transfer forces in the track and at the same time precisely calculate the vertical and sometimes horizontal wheel forces.

Our expertise in this area allows us to collaborate with virtually all major European rolling stock manufacturers in their test centres and production, enabling us to play an important part in new developments and meet special needs.

We are also actively involved in European standards committees on the interoperability and comparability of test processes. As a technology leader, all this allows us to play an active role in setting global trends in rail transport with the motivation to increase safety, economic viability and comfort.



Schenck Process weighing sleeper with integrated force measuring technology



## Schenck Process Group – your global partner



**Acting locally to support your needs, you will find the Schenck Process Group wherever you are.**

With a global network of sites and competent partners, the name Schenck Process is synonymous throughout the world with process expertise and well-engineered measuring technology for industrial weighing, conveying, feeding, screening, automation and air filtration technology.

Our key competencies include planning processes, feeding bulk materials, controlling flows of material, recording flows of goods, weighing goods and automating transport processes.

This is achieved by more than 3200 members of staff around the world and Schenck Process companies in 22 countries on all 5 continents. And with 22 state-of-the-art assembly facilities, more than 130 agencies and over 30 service bases globally.

Members of the  
Schenck Process Group

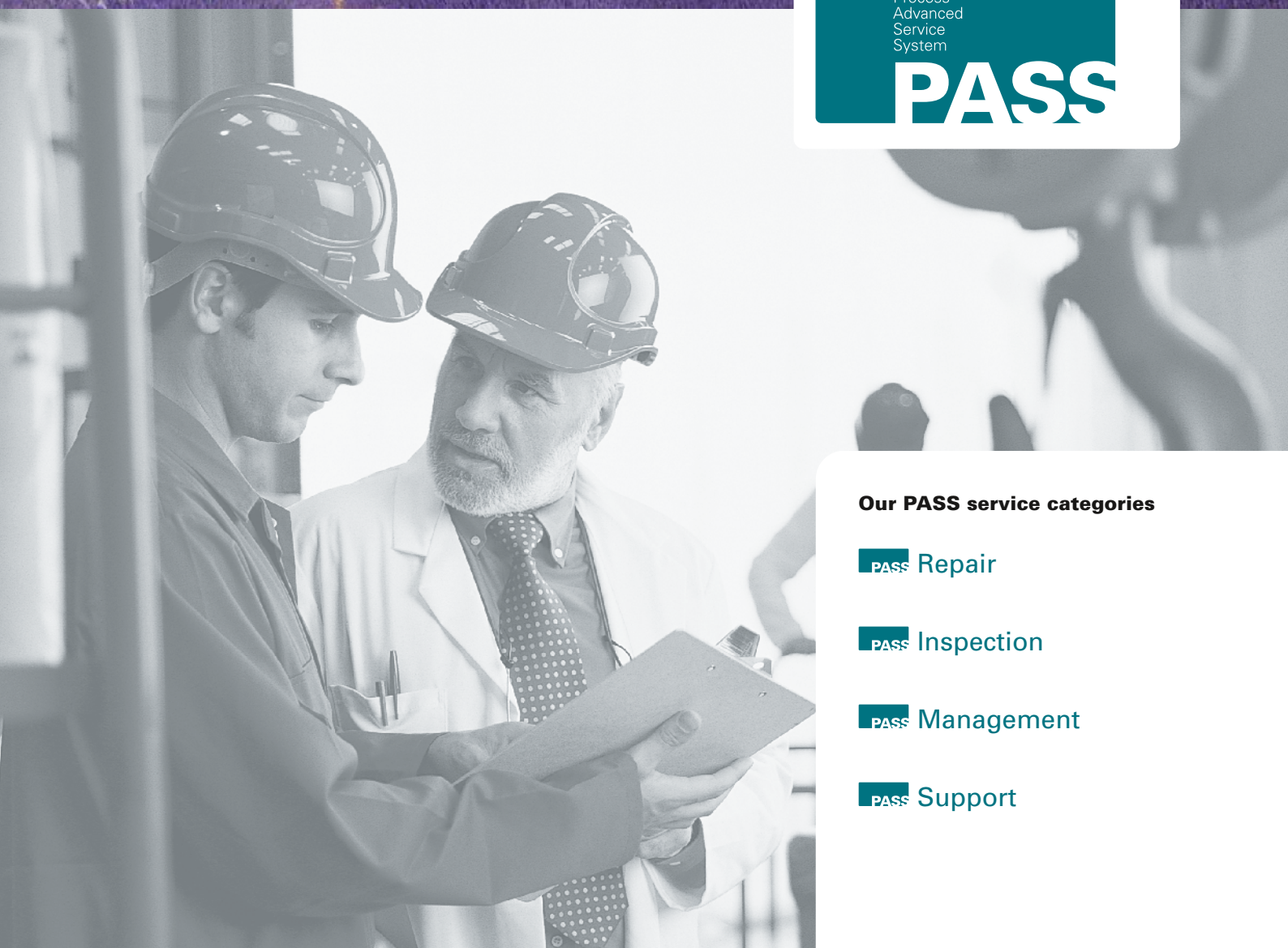
Looking for solutions? Our comprehensive Process Advanced Service System (PASS) offers customer-focussed after-sales service to meet your individual needs.

The structure of our PASS programme is tailored to our customers. Our experienced after-sales team will be happy to produce PASS packages to suit your needs. They may include genuine replacement parts, wearing parts, various services and other high-quality components.

PASS is based on a modular principle. You choose individual PASS products or a combination thereof as required. The products are classified in four categories to make it easier for you to find the right modules.

We look forward to advising you – whether you are looking for a PASS contract or have a one-off enquiry. No matter how you understand full service, we'll help you find what you are looking for!

## Comprehensive service solutions for all your needs.



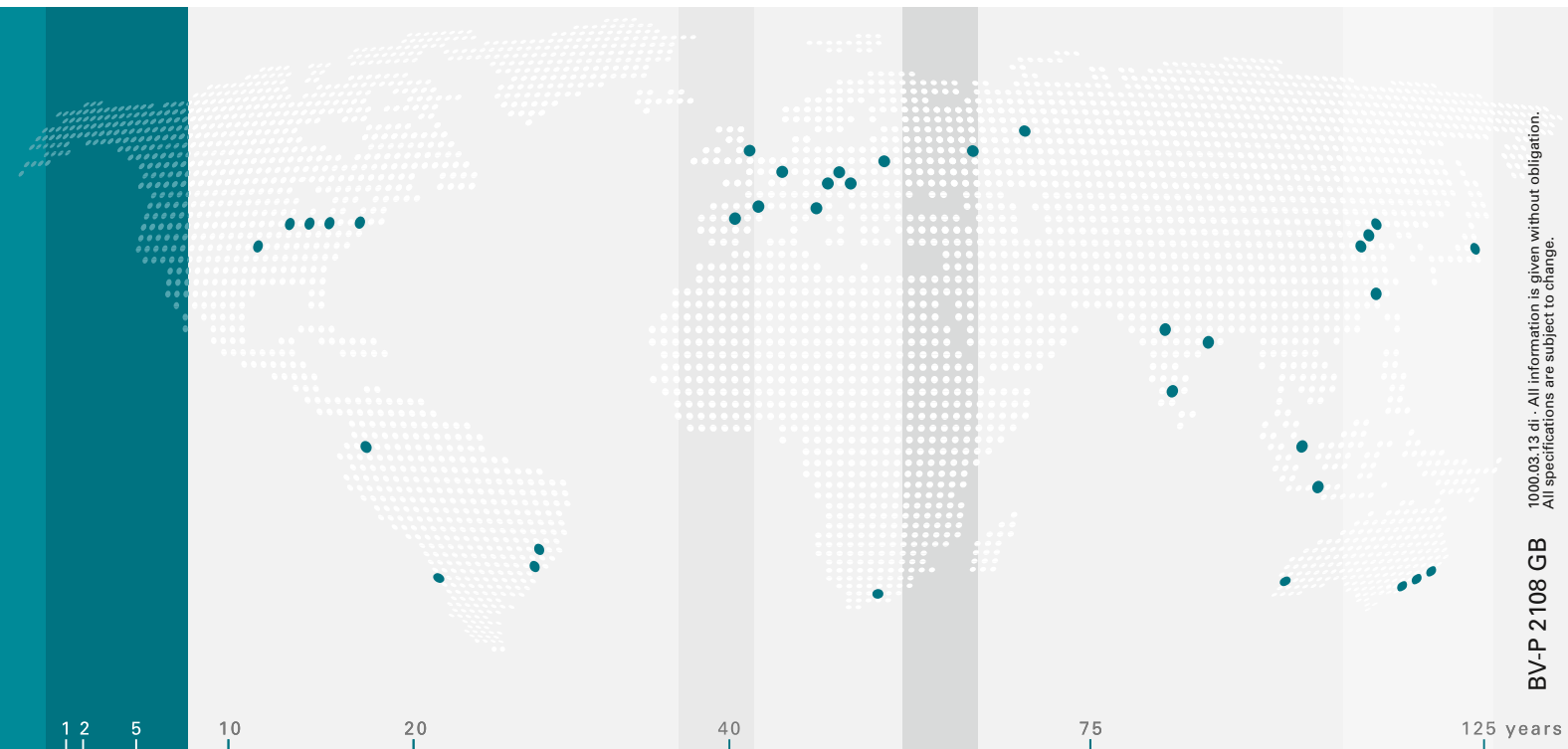
### Our PASS service categories

**PASS** Repair

**PASS** Inspection

**PASS** Management

**PASS** Support



1000.03.13 di - All information is given without obligation.  
All specifications are subject to change.

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Schenck Process is the global market leader of solutions in measuring and process technologies in industrial weighing, feeding, conveying, screening, automation and air filtration technology.

Schenck Process develops, manufactures and markets a full range of solutions, products and turnkey systems on the basis of combining process engineering expertise, reliable components and field-proven technology.

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we make processes work

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