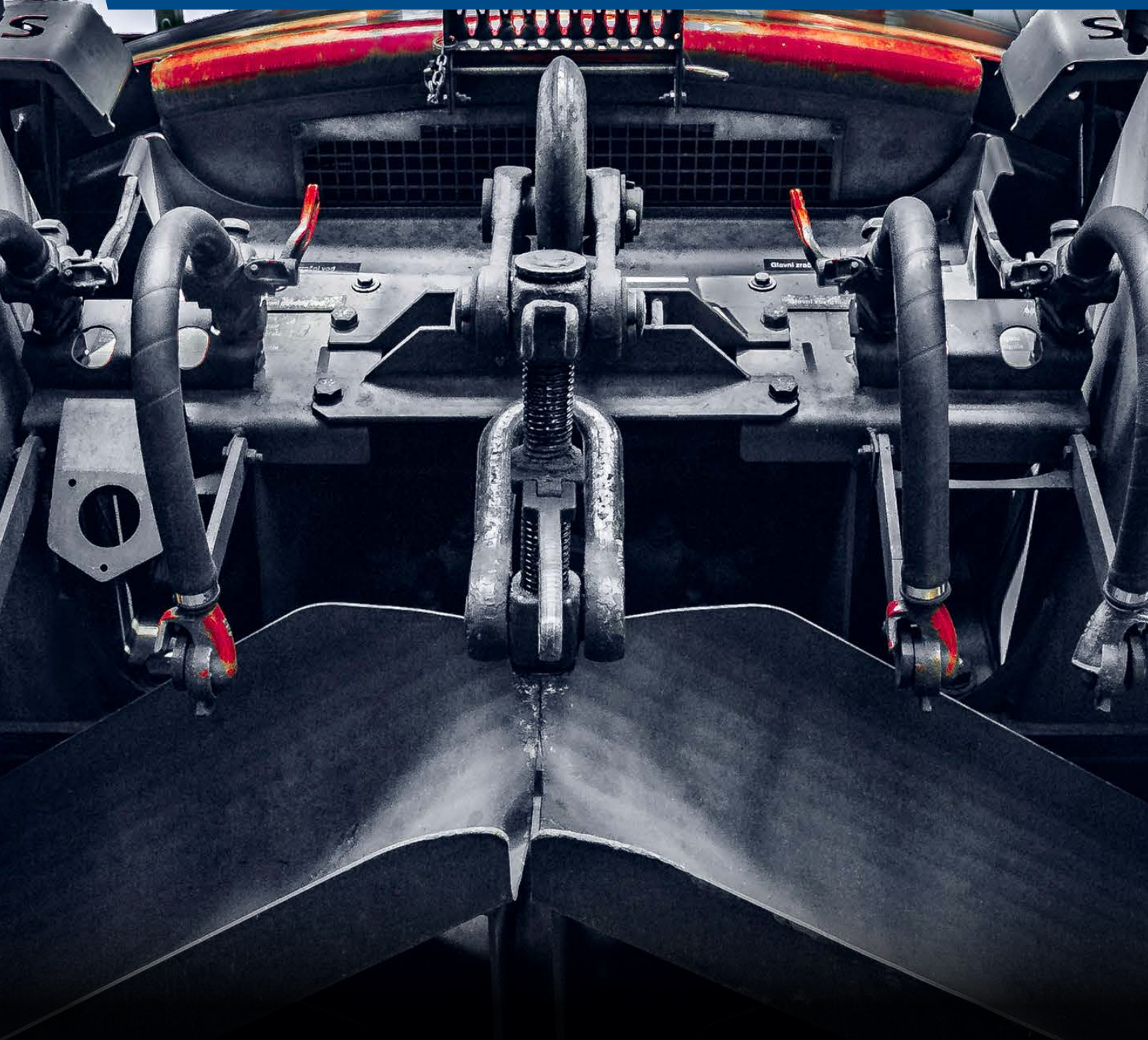


VITaI news

Special events newsletter

No 5/2025



Contents: A steady and relentless pursuit of our vision | More VIT workshops certified to VPI | New horizontal and vertical turning lathes and a refurbished wheelset press | A new work site for axle bearing inspections and checks | Freight wagon maintenance now with laser tech | New projects



Dear Visitor,

I am happy to have another chance of meeting you here at Transport Logistic in Munich. Reaching new milestones every year, this event is a great way to meet new people, strengthen the bonds with our partners, and find new projects to work on in rolling stock maintenance. We welcome every such opportunity and make the most of it to grow and improve together with you.

The maintenance of rail vehicles we offer to customers abroad has been generating revenue steadily for over fifteen years. Driven by the trust placed in our solutions, we strive to deliver more to our customers so they can deliver more to theirs.

I look forward to another year of working with you – or to you starting a new chapter with us – and hope you have a great and productive time at the fair!

Dušan Žičkar,
CEO

A steady and relentless pursuit of our vision

SŽ – VIT, d. o. o. ended the 2024 financial year with good results. In a business environment ripe with challenges, our revenues rose by over EUR 12 million. The operating revenues and expenses totalled EUR 145.7 million and EUR 144.2 million, respectively, generating an operating profit of EUR 1.4 million and a net profit of EUR 232 thousand.

A total of EUR 3.3 million was invested into new equipment and capacity upgrades, with EUR 1.6 million thereof spent on facility renewal and construction and EUR 1.5 million on production equipment. As at 31 December 2024, the company had a headcount of almost 2000 employees.

All in all, 2024 was a good financial year despite the challenges. The deployment rate for both traction staff and wagon inspectors stood at 100%. The workshops were filled to capacity, which has continued into 2025. Going forward, SŽ – VIT will focus on providing supporting services to SŽ Group companies while maintaining service quality and reliability and continue gaining ground on European markets.



More VIT workshops certified to VPI



At the end of last year, a number of our workshops for freight wagon maintenance previously without VPI certification have passed the relevant assessments carried out by VPI, a German industry association for private keepers of wagons and workshops. The newly certified workshops of Divača, Koper, Zalog, and Tezno will thus be joining the ranks of Ptuj and Dobova shops, which have been certified to VPI for over 15 years.

The assessments took place in November 2024 and comprised running repairs to freight wagons. Around the same time, another assessment was underway at Ptuj workshop to expand its certification for wheelset maintenance to running repairs of wagons, as well.

Being certified to VPI holds a lot of weight – it has been an advantage that allowed us to expand to international markets some years ago as the majority of our customers are VPI members and apply the VPI European Maintenance Guide (VPI-EMG) in the maintenance of their freight wagons.



New horizontal and vertical turning lathes and a refurbished wheelset press

Ptuj Maintenance Section had a boost to its wheelset machining services by acquiring a new CNC vertical carousel lathe and a new CNC horizontal lathe, which are vital to this industry's processes, facilitating high precision and quality processing of wheelsets. The lathes are used in the machining of axles and monoblocs of rail vehicle wheels.

This investment brought a number of advantages and improvements to our production processes. The CNC technology allows for precise and fast machining operations, which translates to more capacity. Having a bigger work surface allows us to machine larger and heavier pieces of material, which improves our flexibility and lets us produce complex components.

The lathes also bring in more automation of the work processes. Complex tasks can be fully programmed using CNC-controlled features without the need for human supervision. Time-intensive projects are completed faster and more reliably, which boosts our productivity and frees up labour.

Another major project recently completed was the renewing and upgrading of the wheel mount press, which is a core piece of the equipment used in our maintenance services. The work comprised reconditioning the hydraulic and electronic equipment and adding digital recording of data through advanced measurement technology.

Recording the data digitally is the biggest quality of life improvement in this upgrade. It allows us to track the movement, time, pressure and temperature of components during the mounting process. This gives us more control over the whole process and allows us to respond to errors promptly. The digital recordings are also a valuable resource for various analyses and improvements.



A new work site for axle bearing inspections and checks

We have recently finished setting up a new work site for inspections and checks of roller bearings as part of our efforts to optimize work processes in wheelset reconditioning. The new facility is expected to improve the logistics and improve the quality of the overall wheelset assembly process.

The site is strategically placed between the axle bearing cleaning systems and the wheelset assembly site, which lends continuity to the work processes without having to move the bearings around the workshop. This translates to a notably shorter handling time and reduces the risk to contaminate or damage the bearings during movements in the shop.

Special attention has also been given to work environment standards – the design of the bearing

inspection booth complies with the relevant visibility requirements, which call for lights in the range of 750 and 1000 lux, offering the optimal conditions for precise inspection and evaluation of axle bearings. The booth is protected against contamination, which is vital for high quality processing and long term reliability of components.

The new work site is an important enhancement to our technological and production capabilities. Better logistics don't just mean higher production efficiency – they also reduce the chance of errors and improve the quality of the final wheelset assembly. This investment demonstrates our commitment to continual improvement and high standards in rolling stock refurbishment.

Going forward, we will continue optimizing our work processes and introduce modern tech solutions to make our services even more reliable and efficient.

Freight wagon maintenance now with laser tech

Our Dobova Maintenance Section purchased a new metal sheet laser cutter recently, which uses a Computer Numerical Control (CNC) system guided by Computer-Aided Design (CAD) software. The new system is able to cut blackplate up to 40 mm thick, and stainless steel sheets and aluminium sheets up to 20 mm thick. With a work surface 6 meter long and 2 meter wide, the machine can handle much larger pieces of metal sheet than the old unit. The cutter is a big boost to the shop's output, allowing us to speed up the production for most of the spare parts we make in-house.

In addition to a laser cutter, Dobova now also has a laser cleaning system to prep the inner surface of tank wagons for welding and clean the radial connections on wheelsets. The system combines lightning with physical and chemical reactions to remove paint, rust, grease and other contaminants. Because the surface of the material absorbs very little energy during the cleaning, the material is not damaged in the process, which makes this kind of technology invaluable to our shop.



FIT wheelsets. FIT vehicles. FIT trains.



VIT keeps
your railway
vehicles FIT.

IL, IS1, IS2, IS3

New wheelsets compliant with TSI (BA ULT23, BA ULT25)

Re-tyring

Reconditioning of driving wheel units

Underfloor reprofiling

Non-destructive testing (VT, PT, MT, UT)



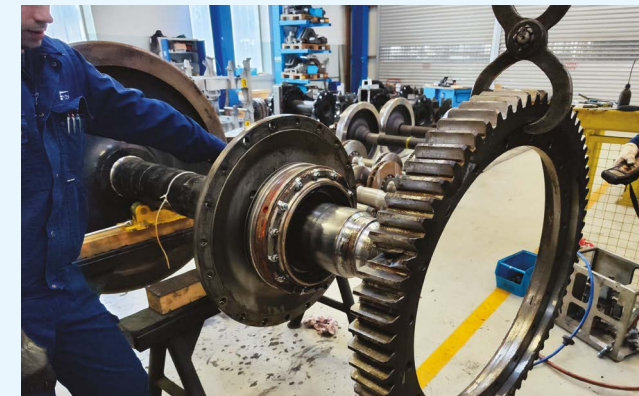
sales@sz-vit.si
www.sz-vit.si



SŽ – Vleka in tehnika, d. o. o., Zaloška cesta 217, 1000 Ljubljana, Slovenia



Monobloc replacement on Class 441 locomotives



Željeznice Federacije BiH awarded SŽ – VIT a contract for the maintenance of rail wheelsets. The work concerned wheels that our shops have not worked on yet, and we were more than ready to rise up to the challenge.

We received 14 wheelsets of Class 441 electric locomotives, which run service in the Federation of Bosnia and Herzegovina, with 12 of the wheelsets needing monobloc replacement while two also required a new gear wheel. Being in charge of wheelset maintenance for the entire fleet of Slovenian Railways (SŽ), we have a wealth of experience with locomotive wheelsets, and this particular job was a great way to put that experience, as well as our shops' specialist equipment, to use.

There is not much difference between the wheelsets of the 441 and other locomotives except for the bearing gear, which holds the reduction gearbox. Next to the monobloc and gear replacement, we also conducted non-destructive tests on the axles.

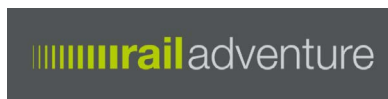
Replacing the wheels on Siemens Taurus – Round 2



Four years after the previous wheels were replaced, the 541 (Siemens Taurus) needed new wheels. Our shops did their first shrink fitting of monobloc wheels back in 2019, which was the first round of replacing the wheels on the freight locomotives operated by SŽ – Tovorni promet. Currently, our workshop is busy with the second round of wheel replacement for Tovorni promet, which was launched at the end of 2023, starting off with the 541-017.

Like in the first stage, we will be replacing the wheels on all powered wheelsets of the 32 locomotives. The replacement/reconditioning of the axle drives on the 32 units of the 541 is planned for completion in 2026.

The replacement process is largely the same as it was when the service was first launched because the technology originally applied remains to be very effective. While there has been no change to the tech, the volume of work for this particular project has come to include a number of other things on top of monobloc replacement, specifically: separating the electric motor (traction motor) from the reduction gear, inspecting the electric motor, renewing stator insulation, inspecting the rotor, replacing the bearings of the electric motor, disassembly, machining and balancing of the brake shaft, replacing brake shaft bearings, replacing silent blocks and reduction gear oil, and inspecting and replacing axle bearing grease.



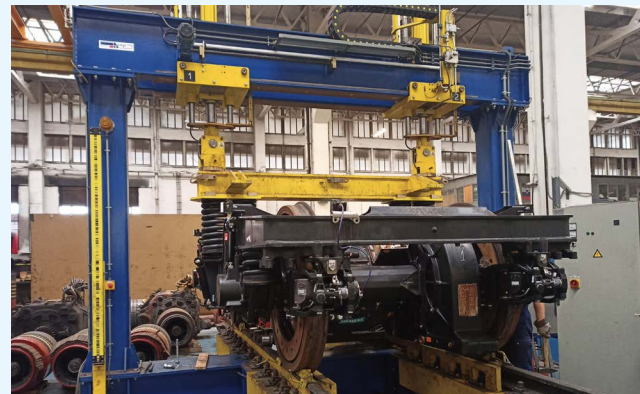
First reconditioning of drive wheel units for an international customer



Our Ptuj and Ljubljana Maintenance Sections reached a new milestone at the end of 2023 and the beginning of 2024 after completing an important project for a German train operator Rail Adventure.

Rail Adventure having become our customer in electrical locomotive maintenance and wheel replacement is a recent development. When monobloc replacement was first added to our portfolio in 2019 as part of a project involving Class 541 locomotives of SŽ – Tovorni promet, it marked the breaking into the international market for this particular service. A project to replace the monoblocs a second time is currently underway on the 541 units in operation on Slovenian network, while work on the first locomotive for Rail Adventure has been completed at the beginning of February last year.

Overhauling the bogies on F4 locomotives



Ljubljana Maintenance Section recently completed another overhaul – 10th in a row – of both the body and bogies on the F4, which marks a new milestone in rolling stock maintenance provided to international customers. With fit-for-purpose equipment operated by our skilled technicians, the objective that we had set five years ago has been reached. Building on the trust placed in our work, our maintenance services continue to gain more recognition.

We have been doing F4 overhauls since 2019, with 27 body overhauls under our belt to date. In 2024 we launched bogie overhauls as a subset of locomotive overhauls. Bogie overhauls are done in advance and, once the bodywork is complete, an overhauled bogie is swapped in place of the previous unit.

The work is done at our workshop in Ljubljana, which has a wheel mount press and a turntable. In the overhaul, the drive wheel units are rolled out and sent to a shop abroad for wheel replacement. The work is similar to overhauling the 541, with the difference that the shop in Ptuj replaces the drive wheels in-house. Refurbishing the drive wheel units and replacing the wheels in-house is on our to-do list also for the F4.

Ljubljana Maintenance Section with a new customer



In 2023 the freight operator SŽ – Tovorni promet took a new lease on two Vectron locomotives from Railpool, a rolling stock leasing company from Germany. The Vectron are multisystem locomotives manufactured by Siemens that our shops have a lot of experience with in terms of scheduled maintenance and repairs. Because the locomotives run service on Slovenian rail network, VIT is the go-to choice for their maintenance in order to minimize downtime.

The first talks of doing maintenance on these units took place at the 2023 Transport Logistic fair, with an assessment of our workshops following short after to make sure we meet the relevant requirements. After completing the assessment, the first locomotive entered our shops in late November 2023 for an I1 inspection.

Railpool locomotives now come in regularly for maintenance along with a number of other locomotives from international customers. Inspections on Vectron units are provided up to Level I3.

General repair of the 643-051



The first general repair of the 643-051, a locomotive of the passenger operator Željeznički prevoz Crne Gore (ŽPCG) from Montenegro, was completed around 10 years ago. Satisfied with the results, ŽPCG decided to send us another locomotive for general repair. The contract was awarded in a public call for tenders, with VIT being the only bidder owing to a shortage of providers in the Balkans for general repairs on diesel locomotives.

The 643-051 was delivered to Maribor at the end of 2022, with 10 months planned for completion according to the contract. A full disassembly of the locomotive and its assemblies showed, however, that the engine shaft and the diesel motor block need replacement. As these services were not covered by the contract, a new call for tenders was published for a SHORT motor level A by Wärtsilä, which extended the repair period by about three months.

After completing the test runs in the presence of the owner's representatives, the locomotive was returned to ŽPCG at the start of November 2023.



Overhaul of SILAD freight wagons



At the end of 2023, a Robel 40.61 – SILAD long-rail train entered our workshop for an overhaul from the Slovene rail engineering and construction company Železniško gradbeno podjetje (ŽGP). The train consists of nine four-axle flat wagons with a total length of 178.2 m and is designed to transport, load and unload rails up to 120 m long.

Dobova Maintenance Section, which had provided overhaul to the train's wagon ever since they entered service, also overhauled the powered unit this time around. The work involved replacing the brake piping, electrical cabling and the air reservoirs, changing the vehicle superstructure, partially renewing the engine, sandblasting, and a repaint.

New customer in carriage maintenance



On top of doing maintenance of wheelsets and specialised vehicles, our Ptuj Maintenance Section also handles carriages (passenger coaches), where we offer everything from running repairs to large-scale overhauls. While most of the work on carriages is done for Slovenske železnice, we occasionally receive overhaul requests from abroad, as well, typically by train operating companies from Former Yugoslavia countries. Moreover, the shop in Ptuj has a painting booth, where we do paintwork to give rolling stock a new look.

At the start of our collaboration with GfF Gesellschaft für Fahrzeugtechnik mbH, a German rolling stock maintenance and rental company, we delivered services such as repainting, carbody welding, wheelset replacement, maintenance of high voltage electrical installations and battery systems, and wheelset machining. Later on, the shop in Ptuj has also taken on certain maintenance tasks for GfF customers and now delivers maintenance for a large variety of coaches running service in Europe.

Restoring a steam locomotive – heritage exhibit



The train station of Nova Gorica, which has been reopened in late January this year following a revamp, is now proudly displaying a restored vintage steam locomotive. The JŽ118005 was brought back to its former glory by our skilled technicians from Divača Maintenance Section in Nova Gorica.

The restoration work was done at our depot in Nova Gorica, which is mainly in charge of multiple unit and diesel locomotive maintenance. Under Yugoslav Railways, however, this place was housing a depot which serviced both locomotives and wagons. Having the work done in Nova Gorica helped cut the cost of moving the locomotive to Divača and made the project easier on the organisational side of things.

Built in 1922 by Officine Meccaniche Napoli, the locomotive was designed for mountain railways, and was used by the Yugoslav Railways to run service on the route between Sežana and Jesenice.

The restoration was a large-scale process involving a complete refurbishment of all exterior components – some having to be replaced – welding on a new steel sheet layer, and restoring everything other than the boiler and the steam system.

Restoring a steam locomotive – the 151-001



The JŽ 151-001 has been on display in front of the main train station in Maribor, Slovenia for a good 40 years. It was originally placed there by rail enthusiasts in 1983 on their own initiative. Having been exposed to the elements for so long, however, had left the locomotive in rather poor shape, with its steel exterior under heavy attack by rust.

An arrangement was hence made to send the locomotive to our shop for complete restoration. She arrived in mid November 2023, and we immediately set off to give her a thorough washing, cut away all the rusting and fit her with new steel sheeting. The entire body was coated in Chelade, a chemical converter that neutralises rust and creates a protective layer that acts as a primer, ready for top coating. We then did a complete repaint in black. We finished by adding some white and red highlights on the wheels, lettering and the body to resemble the original paintwork as closely as possible, going off a picture taken in 1983 when she was first put on display at the Maribor train station. We also re-did the inscriptions and markings. In mid December 2023, she was returned to the platform in front of the station.

FIT locomotives. FIT wagons. FIT trains.



All services needed for safe and reliable vehicle operation from a single source.

VIT keeps your railway vehicles FIT.

- Preventive and corrective maintenance
- Modification and renewal
- Wheelsets



sales@sz-vit.si
www.sz-vit.si



Customer satisfaction with rolling stock maintenance

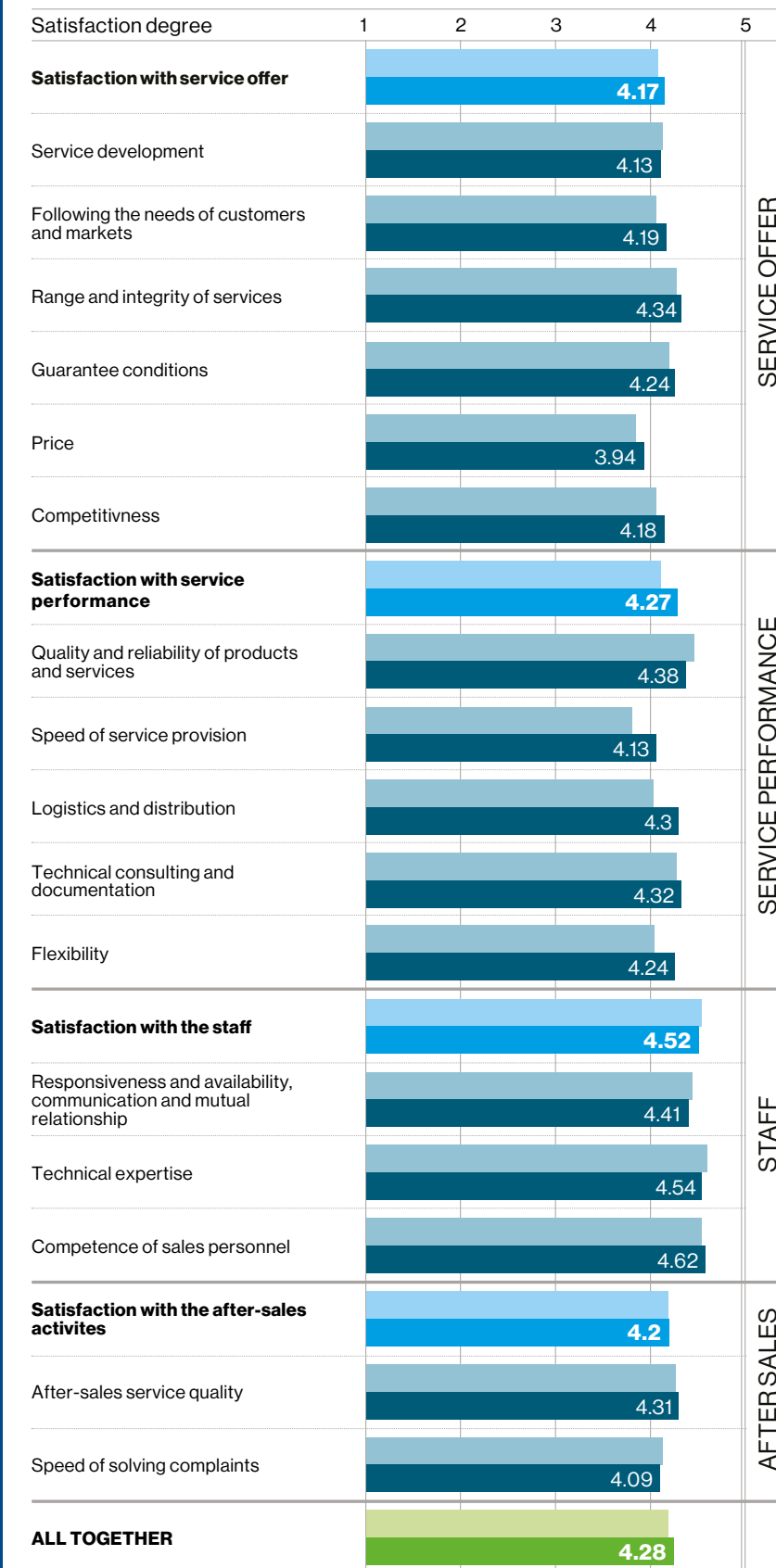
In spring we conducted an annual survey to gather feedback from our customers regarding their satisfaction with our services and the way they are delivered, our employees, and the after-sales services. The survey also asked the customers about any bad experience, things we could improve on, and the chances for continued collaboration. The satisfaction was measured for all customers, regardless of the service rendered, with the results for rolling stock maintenance featured below. Overall, the feedback we obtained was very encouraging.

The response rate stood at 63%, which is the highest to date, featuring 10 Slovenian companies (out of 19 invited) and 31 international companies (46 invited). The most common services provided to the customers surveyed concerned the maintenance of wheelsets and freight wagons, followed by electrical and diesel locomotives.

The survey showed that our customers are generally very satisfied with their interaction with us, giving business collaboration a rating of 4.51 on a scale of 1 to 5. Results by individual segment indicate that satisfaction is the highest with our employees, their skill, know-how, and quick response times. Next in line are service delivery, after-sales services, and our offer of services. The segments all scored an average rating of 4 or higher, which is better than the competition. The total average rating of all questions answered stands at 4.28.

As many as 67% of the customers intend to continue doing business with us, while 23% think they are likely to commission more services in the coming years. As many as 37 out of 41 would recommend SŽ – VIT to their business partners.

We are very happy with the feedback we collected and will continue doing our best to meet your expectations. Your time and the valuable information you provided are most appreciated.



- satisfaction degree of the group 2023
- satisfaction degree of the group 2024
- satisfaction degree 2023
- satisfaction degree 2024

Freight. Tank. Special. Any wagon is **FIT** with **VIT**.



VIT keeps your railway vehicles FIT.

- Preventive and corrective maintenance
- Refurbishment and modernisation
- Wheelsets
- Bogies, buffer and draw gear
- Brake equipment
- Pressure testing of tank wagons
- Non-destructive testing
- Washing and cleaning
- Sand blasting and painting



SŽ – Vleka in tehnika, d.o.o.
Zaloška cesta 217
SI-1000 Ljubljana, Slovenia
www.sz-vit.si
sales@sz-vit.si



Our Customers



Committed to your logistics

VIT KEEPS YOUR RAILWAY VEHICLES FIT



**Beyond expectations and borders –
quality maintenance from Slovenia**



**ONE-STOP SHOP
FOR YOUR RAILWAY VEHICLES MAINTENANCE**

SŽ – Vleka in tehnika, d.o.o.
Zaloška cesta 217,
1000 Ljubljana, Slovenija

Phone: +386 1 29 12 197
E-mail: sales@sz-vit.si
www.sz-vit.si

