

First Choice When it Comes to Service



Product quality is only worth half as much without service. As a consequence, our service philosophy is based on interactively networking between the regional hubs of the European IMATEQ organization and with Service Engineering at Vossloh Rolling Stock in Kiel. Closely linked to the know-how brought to bear on new vehicles by the Development Department, we want **our long years of experience and extensive problem-solving expertise to be the reason customers always make us their “first choice”.**

With our success in managing and providing support for our customers’ portfolios – across borders and, of course, ECM-compliant – we’re ensuring that rail transport in Europe is safe and reliable. We take advantage of what is possible digitally by working together with locomotive operators in a kind of “Mixed Reality”, whereby processes and all the vehicle documentation become fully transparent.

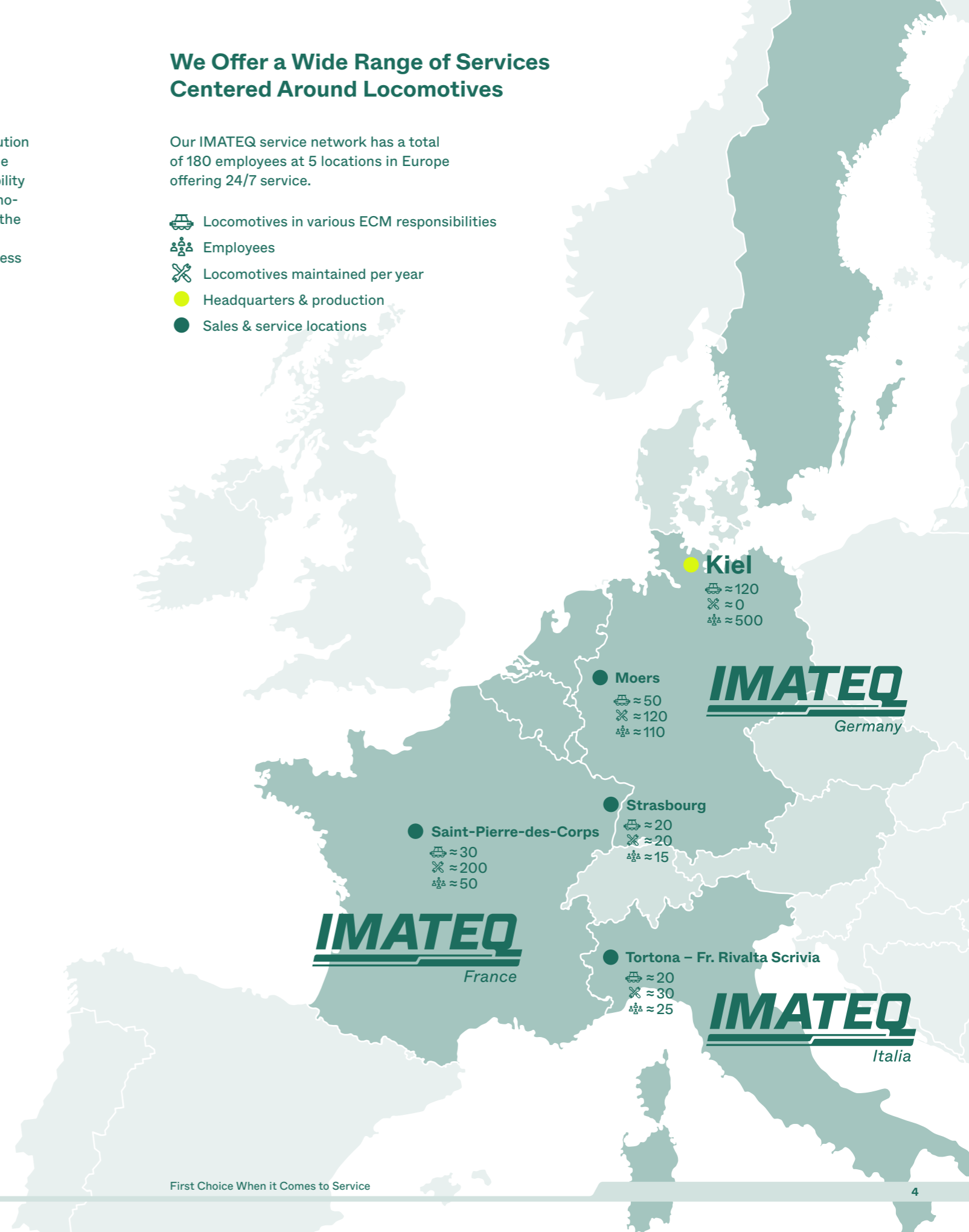
Quickly determining the root cause and a solution to the problem – also handled by our on-call mobile service teams – ensures that a locomotive’s availability remains high. By continually improving drive technologies, making application-based adjustments to the operating parameters or installing more advanced components, we’re ensuring universal network access and also continually improving the efficiency, eco-friendliness and user-friendliness of the vehicles currently in operation.



We Offer a Wide Range of Services Centered Around Locomotives

Our IMATEQ service network has a total of 180 employees at 5 locations in Europe offering 24/7 service.

- Locomotives in various ECM responsibilities
- Employees
- Locomotives maintained per year
- Headquarters & production
- Sales & service locations





In Good Hands: Certified Service Carried out by Experts

While IMATEQ Germany and IMATEQ Italy are one hundred percent subsidiaries of the Vossloh Rolling Stock Group, IMATEQ France was founded in 2015 as a joint venture with Vossloh Rolling Stock France and Socofer as equal partners. The collaboration with and immediate proximity to partners specialized in the provision of railway vehicle technology services creates numerous synergies not only for customers but also for both companies.

As Vossloh Rolling Stock's authorized partner, IMATEQ is perfectly integrated into the ECM service structure. While all obligations in connection with

- overall maintenance management,
 - maintenance development,
 - fleet management and the required maintenance works
- are handled in Kiel, we take on the responsibility of handling some or all of the ECM functions – exactly according to our customers' specifications.

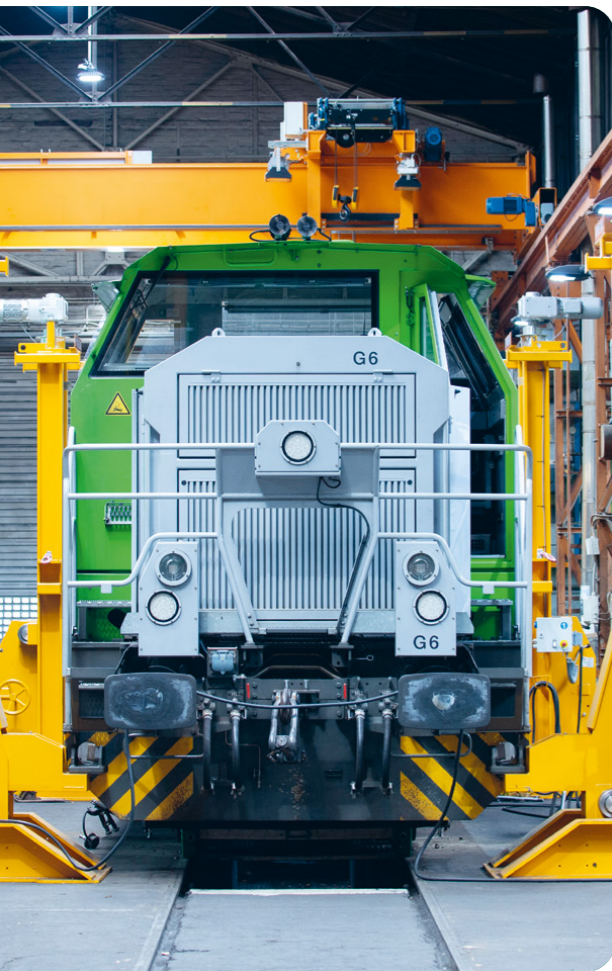
Our comprehensively trained personnel carry out all the necessary maintenance and repairs, and our certified service portfolio ranges from main inspections and accident damage repair to modernization measures. Thanks to the standardized processes we have organized across borders, we're able to offer our customers comprehensive service quality. IMATEQ keeps response times short by maintaining several service support locations in Germany, France and Italy, or else working together with partner workshops, as in Sweden, for example.

Just how competently, carefully and sustainably IMATEQ looks after its customers and their locomotives was reaffirmed by the ECM compliance audits (levels I to IV) carried out in Moers and in Saint-Pierre-des-Corps in early 2022. IMATEQ Italy in Rivalta will be audited again in 2023.

400

More than **400** locomotives are maintained at different ECM levels each year and more than 120 locomotives are the focus of various ECM responsibilities.

State-of-the-art Service Locations Perfectly Tailored to meet Customers' Needs



With excellent access to the railway network, the infrastructure at our IMATEQ locations is state-of-the-art. The generously dimensioned workshops, maintenance sheds and paint shops can accommodate locomotives of up to 22 meters in length with a total weight of 120 tonnes without much shunting required. The layout takes into consideration the different time periods required for the respective repair and maintenance tasks. In a matter of minutes, a locomotive can be taken for test runs or driven onto the trunk line for final delivery.

Since customers seldom have homogenous vehicle fleets, our portfolio naturally also includes looking after rail vehicles from other manufacturers. In future we'll also be looking after electric and hybrid locomotives with our usual efficiency and reliability, and this will also include, for example, the locomotives made by CRRC ZELC in Europe.

In order to be able to meet our customers' material requirements despite the current global supply shortages and even on short notice, the storage areas at our locations are sized according to country. Reserve stocks of replacement parts allow us to reduce throughput time while the ECM-compliant procurement of certified replacement parts is handled by the main storage facility in Moers. If required, replacement parts can be ordered quickly and easily through framework agreements signed in connection with Vossloh Rolling Stock's B2B platform. The online catalogue contains pictorial representations of each specific customer locomotive model in order to simplify part identification.



Providing our staff with specific qualifications creates a modern working environment characterized by autonomy and responsibility. That's how decisions lead directly to solutions.



The digital revolution is bringing sustainable benefits to the field of service and maintenance. We continually subject the latest technologies to extensive testing and integrate them into our workshop routine in order to be able to look after our customers even more quickly and reliably.

The relationship with a customer often begins when new vehicles from Kiel are first delivered. We add the finishing touches to country-specific components in our workshops prior to delivery and carry out laden journeys and test runs. In addition to our customer-friendly and professional handling of warranty work, our customers also particularly like our local service culture and the modular service packages we offer. Customers can commission individual maintenance levels either at fixed prices or under a maintenance contract with flat monthly rates – including, if desired, fleet management and ECM functions.

IMATEQ's comprehensive service portfolio includes:

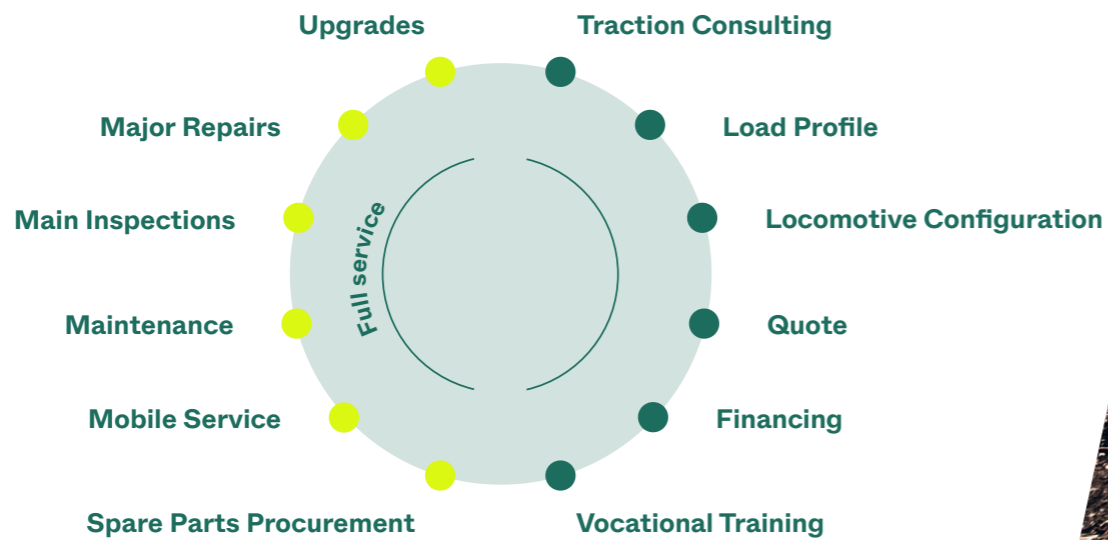
- mobile service with a pool of comprehensively equipped service vehicles covering a deployment radius of 300 km from the workshops to the customer
- maintenance, repairs, auxiliary system modernization measures and high-quality paintwork
- repairs to bogies, brake system components, cooling systems, hydrostatic auxiliary drives, wheelsets, final drives, diesel engines and hydraulic transmissions
- the installation of new diesel engines
- the installation of electronic locomotive control systems with various monitoring functions
- an extensive range of training courses:
 - e.g. locomotive operation, fuel-efficient driving techniques, etc.

Repaired and modernized locomotives do not leave the plant until they've successfully undergone extensive operational tests. As such we guarantee their long-term reliability and value retention over decades.

In order to ensure that the verification requirements necessary across all areas of maintenance are met, the majority of our customers opt for service level agreements, which we orient to each customer's strategic requirements. These framework agreements also govern reconditioning times and documentation in the language of the country. Long-term contracts and/or larger volumes can also be coupled with guaranteed delivery times. And under a Full-Service Agreement, our ad-hoc service can be provided even more efficiently.

It goes without saying that we're constantly expanding the range of services we provide. In so doing we're making use of new potential, e.g. in digitalization and obsolescence management (the systematic recording, analysis and monitoring of critical parts, components, basic materials and software) so that we can guarantee our customers the best service quality, flexibility and reliability of supply. This also includes continually optimizing and automating processes as well as optimizing workshop management.

**Service throughout the Entire Lifecycle
Success Factor for our Customers**



Our strategic and operative obsolescence management ensures that materials remain available throughout a locomotive's service life.

Partnership – for an Entire Locomotive Lifetime



The core of our service philosophy is to always be a competent contact and consultant for European operators when it comes to maintenance, replacement parts, ECM responsibilities, wheelset work, accident damage repair or approvals.

Always on Board: Experts in Digital Locomotive Maintenance



In keeping with the progress of digitalization, all the European service network locations use the **Maintenance Management System**. Its cockpit functionality gives fleet managers and technicians fully comprehensive external access to all the relevant status information and alarm messages. Exchanging data with the locomotives in real time speeds up problem identification and the assessment of both the situation and the further measures required. The GPS coordinates help in case any spare parts need to be delivered.

The Maintenance Management System:

- displays the locomotive's entire structure with all its components
- makes all the information available on one user interface

- stores the intervals agreed on with the customer/ECM according to hours of operation or kilometer reading, etc.
- maintains a life-cycle record for every component part including a description of its condition and history
- displays the qualifications of the workshop/service employee

Integrated maintenance measure planning

In future we'll be using tablet systems to implement this important tool in the workshops just as we do today for our mobile servicing. By completely and comprehensively digitalizing the maintenance documentation and all the works previously carried out, we're setting new standards in the provision of cross-border maintenance services for locomotives. Fully documenting the vehicle's entire history allows locomotive data to be retrieved in unprecedented detail and with a level of transparency never seen before. Not merely a required basis for ECM-compliant, component-based maintenance, we consider it to be an indispensable tool during the warranty phase of service contracts and hotline services.

The **introduction of Vossloh Rolling Stock's Modula** enables us to go significantly further. This new hybrid locomotive was built according to the "Design For Serviceability" maxim in order to comprehensively integrate the principle of condition-based maintenance into a locomotive for the first time. It now enables us to replace components as modules very quickly. Equipped with sensors and GPS modules, this smart locomotive also continually transmits component-based status and location information. This is compiled in the digital master display – the Digital Intelligence Center – for the purpose of supplying vehicle data with standardized protocols for live analyses.

Optimum use of lifespan reserve

In future, we'll be able to use threshold values and monitoring logic to comprehensively analyze and evaluate the condition of critical locomotive systems. The locomotive undergoes maintenance that is flexible depending on the number of kilometers the locomotive has traveled and the time it has spent in operation. With usage-based maintenance, we're laying the foundation for dependable vehicle scheduling. The lifespan reserve of the respective components is used in the best way possible, which results in reduced maintenance costs.



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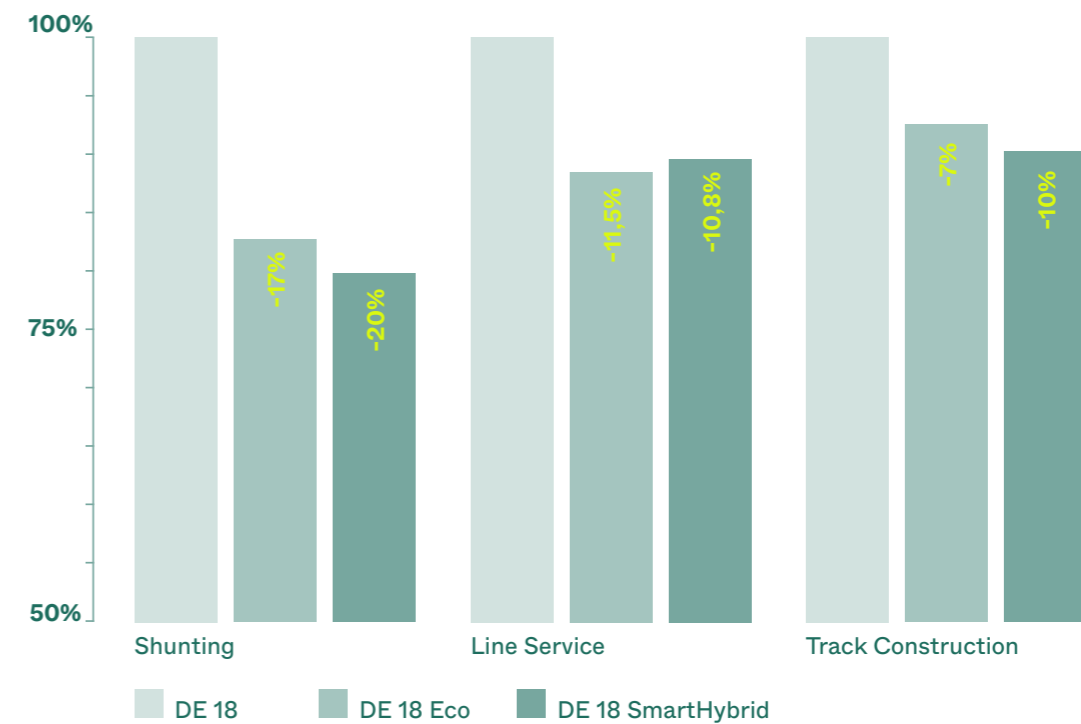
Ultimately, the Digital Intelligence Center also supports our digital fleet management. It enables processes to be continually optimized and automated through identifying cost-savings potential and generating LCC diagrams in the RAM-LCC report, and it also allows us to flexibly adapt our Workshop Management at the same time.

An Equipment Package to Suit Every Field of Application



Locomotives have a long service life – more than 40 years in some cases. Their annual output is approximately the equivalent of the entire lifetime of a passenger car, and the uses to which they're put also change over time.

We ensure that locomotives can operate effectively and conserve fuel during every phase of their service lives without having to compromise on performance. Our customers benefit from all kinds of product-related services. These range from the optimization of fuel consumption by using different operating modes and extra functionality to technological upgrades (e.g. engine management or the installation of emissions-reducing traction batteries) and larger-scale modernization measures. With easy access to the manufacturing and servicing expertise of Vossloh Rolling Stock and Socofer's engineering skills, IMATEQ is implementing new concepts and technologies in its maintenance work to meet future requirements.



Simulation data is provided by real operational scenarios.

Rated engine power is reduced to 1200 kW in ECO-mode.

Rated engine power is reduced to 1500 kW in Smart Hybrid mode.

A Passion that's Infectious

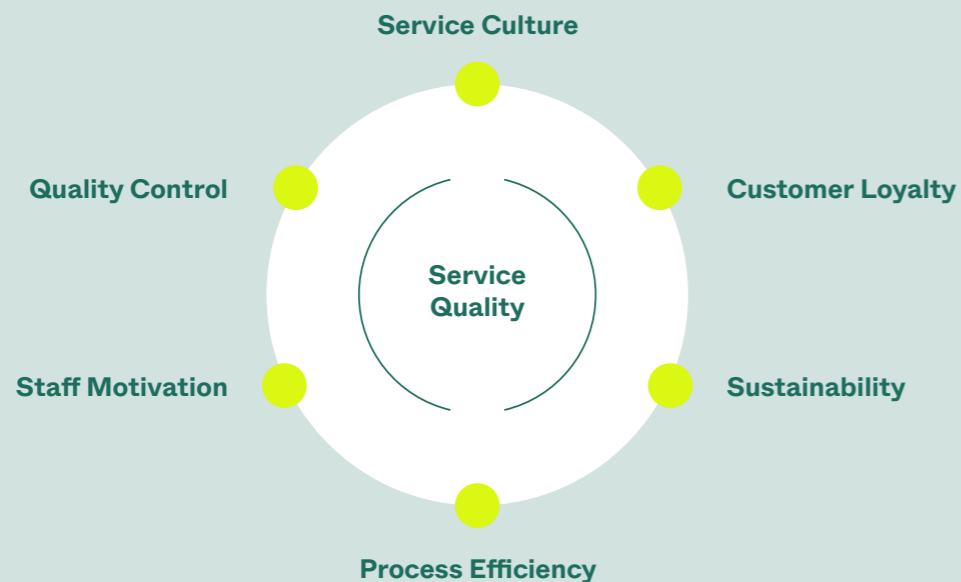
Welcome to the World of Railways

Our staff are at the heart of our aspirations and aims of being a customer's first choice when it comes to service. The IMATEQ service locations are staffed by highly motivated teams united by an enthusiasm for locomotives and the development potential of technology. We attach great importance to regular training, seminars and collective learning, and many years of railway expertise combined with youthful curiosity are coupled with the desire to tackle situations differently and think in new ways. Our focus on cost-effectiveness from which the customer benefits means working closely with customers, becoming better and ultimately being able to offer the perfect solution.

In addition to digital technologies, IMATEQ also uses the REX platform (Return of Experience), which is represented by locally-based engineers, to permanently incorporate the experience gained on different customer projects into the organization.

Rail transport has seldom had such a future-oriented role in society. Consequently, anyone who is interested in an apprenticeship or new to the workforce or even from a different industry is welcome to discover their future at IMATEQ in an ultra-modern, environmentally-friendly industry sector.

We are, of course, well aware that the "green railway" image comes with a lot of responsibility. Our regional engagement is always contingent upon strict compliance with all the applicable regulations on preventing environmental hazards. All of our state-of-the-art facilities fulfill the latest requirements. And whatever we do – whether it's at the IMATEQ locations or on site with the customer – it's constantly oriented to contributing to permanently reducing CO₂ and noise emissions.



If you're interested in our products and services, please feel free to contact us:

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