



**SIEMENS**

*Ingenuity for life*

# Moving beyond rail services.

Ensure maximum availability  
with a tailored service contract.



# Trust Siemens to extend and enhance the service life of your vehicles.

When reliability and sustainability of your operations are on the line, who would you trust more than the people that built your vehicles? With Siemens you have a partner that not only knows your trainsets best but can also draw upon 100 years of rail service expertise and a global network of experts. We've developed a portfolio of innovative services that can be tailored to your individual needs to deliver maximum availability, reliability, and return on investment.

The economic efficiency and availability of rail service are the keys to your success. Siemens Rail Services helps you attain these objectives as your reliable partner. With our ground-breaking technologies, we help you optimize your operations and utilize your assets more efficiently. An important ingredient is digitalization – ranging from the prospective analysis of complex technical questions to prescriptive maintenance and on through to next-generation business models that enable you to focus on your core business of mobility. Are you ready?

# Digitalization

Enabling recognition instead of failure

## Make mobility safer, faster, and more convenient

Digitalization is enabling huge developments in the way maintenance is performed. Now it's possible to use real-time diagnostic data to prevent errors and faults. With prescriptive maintenance, systems are now able to offer recommendations based on forecasts. In turn, this heralds the next generation of maintenance, in which service providers will use data-based decision-making support to enable them to offer guarantees of availability. Locomotives, trains, components, train automation systems – everything is a valuable source of data. With Siemens Digital Services, a state-of-the-art system that processes this wealth of transportation data, transport operators analyze trends and monitor the status of machinery and the flow of passengers and goods to offer a smooth transportation experience.

## Spot weaknesses before they're an issue

Decrease downtimes, increase availability and capacity. Siemens Digital Services monitor and analyze data in real time for prescriptive services and intelligent energy management. Through our services we've helped existing rail lines increase capacity by 30% or more.

## Rail Services Locations in the U.S.

Customer value through proximity, vertical integration and customized services





# Digital Services

Intelligence that keeps your trains on the move

Siemens enables our customers to improve operations, maintenance and safety to create value and enhance rider experience. We create smart solutions that not only allow mobility providers to react swiftly to any given situation, but to anticipate the situation before it occurs.

## Services include:

### Railigent Connect

Connect your vehicle fleet and infrastructure to the Siemens Mobility Services data platform with protection against failures and costly damages

### Fleet Monitoring

Get an overview of events affecting both vehicles and the line – everywhere, at any time

### Smart Data Analysis

Benefit from the fact that we take data and analyze the connections, identify patterns and trends, and make an accurate diagnosis if any anomalies are found

### Failure Prediction

Initiate action before any errors occur or before they have any effect – proactively and with confidence in the outcome

### Performance Analysis

Get more out of your components – by using our Digital Services to improve availability and performance

### Operation Support

Put your operations onto a new footing by providing insights into your operational practices and patterns – enabling you to optimize your operations

# Maintenance Services

Proven solutions for maximum availability and efficiency

Improve the effectiveness of your operations with a tailored service program that best addresses your needs and capabilities. Our expertise extends across all vehicle types and their subsystems, including urban, regional, long-distance, and high-speed networks.

No matter your fleet, Siemens maintenance services offer you flexibility. We can provide a full complement of experienced technicians. Or, through a Technical Support, Spares & Supply Agreement (TSSSA) we can back-up your team with supply chain management, engineering support, and onsite experts. With a maintenance service contract, you'll have the peace of mind that comes from improved reliability, reduced uncertainty, and more predictable costs.

## Services include:

### Full Maintenance

We optimize your maintenance activities

### Technical Support, Spares & Supply Agreement (TSSSA)

Improve maintenance operations with your existing workforce

### Technical Support, Spares & Supply Agreement (TSSSA)

Fixed Fee Performance based contract with Guarantee's; Predictable Cost Basis and Continuous Improvement

*“This is a very modern train. Everything is being monitored and data is being collected on anything that is happening, be it a normal event or fault.”*

Tom Rutkowski, VP of Engineering and Chief Mechanical Officer – Virgin Trains USA





# Spare Part Services

The parts you need, right when you need them

Ensure that your specialists have the right components on hand – quickly, easily, and reliably. Our Spare Part Services optimize your inventories with new, repaired, or refurbished spare parts. And, with innovative production methods, such as 3D printing, we can manufacture improved spare parts designed exactly to your unique specifications. We also protect you from parts obsolescence with solutions that ensure availability over the entire life cycle of your systems.

## Services include:

### Day-to-Day Spares

On-time delivery of spare parts, special tools and test equipment

### Capital Spares

We ensure that spare parts are available quickly and easily

### Part Exchange (UTEX)

Unit exchange and rebuilt components that enhance longevity and reduce cost

### Repairs

Fast, high-quality repair for your spare parts and critical components

### Vendor Managed inventory (VMI)

“On-time and in-full” material delivery service



## Our mission

*With digitalization we enable mobility operators worldwide to make trains and infrastructure intelligent, increase value sustainably over the lifecycle, enhance passenger experience and guarantee availability.*

## Our vision

*We are global entrepreneurs, trusted by our partners to pioneer transportation, moving people sustainably and seamlessly from the first mile to the last.*



# Upgrade Services

Enhance the value of your systems, long-term

Increased energy efficiency, improved comfort, and greater reliability – there are many good reasons for modernizing, enhancing, or repairing your rail vehicles and subsystems.

Another good reason is extension of the life cycle of your assets for a better overall ROI. Whether interior conversion, system upgrade, or refurbishment – with Siemens Upgrade Services, you can be confident that your fleet will travel into the future with maximum comfort, low emissions, and high energy efficiency. We provide expert enhancements, refurbishments, and accident repair.

## Services include:

### Communication System Upgrades

Step up to the latest technology, quickly and easily

### Passenger Information Systems / CCTV

Enhance the passenger experience and safety

### Refurbishment

Overhaul services for your fleet and subsystems

### Accident Repair

Accident repair services for your vehicles, including appraisal and insurance processing

### Major Component Upgrades

Bogie/Truck and axle overhaul services

*“We are very pleased with the performed workmanship and would highly recommend Siemens for this type of accident repair project.”*

Bryan Sawyer, Utah Transit Authority

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## Vehicle Accident Repair Service

Proven service that provides confidence and peace of mind.

Accidents happen. When they do, you can count on Siemens expert services to repair your damaged vehicle to OEM specifications so it can return to revenue in peak condition. We back up our vehicles with proven service that keeps your rolling stock moving. Siemens is your reliable partner for even the most difficult repairs, helping extend the life of your fleet.

### Risk-free repairs

Thanks to the expertise of our repair teams and the ongoing involvement of our engineers and quality assurance staff, the repairs will be risk-free to you. With Siemens as your partner, you can be confident that your repaired light rail vehicle, locomotive, passenger car or bogie will be OEM qualified and compliant.

### Expertise you can count on

We know what it takes to repair damage from all types of accidents, from those involving cars or trucks...  
derailments, to fire hitting the catenary. Our comprehensive expertise the vehicle from And our risk can repair get your and car as to get dar per c.

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Siemens Technical Support & Spares Supply Agreements (TSSSA) meet the challenges and supports the goals and objectives of transit providers by optimizing fleet reliability, maximizing maintenance costs. With a TSSSA structure that is determined by the customer and supports provided and eliminates the fluctuating costs that can make budgeting and maintenance so difficult.

Our TSSSA includes the provision of on-site technical experts, partnering who manage and support fleet maintenance operations. Additional support includes engineering and diagnostics to help optimize agency operations, and a robust supply chain management team working to provide

all necessary parts when they are needed.

Through on-site technical transit agencies have a for analysis, engineering inspections of equipment software upgrades. In expertise, the tools to identify problems solutions before the. Also, failures can be on current performance action can be taken in service.

With a TSSSA transit are fully backed by support and our of expertise. The Siemens Support Center performs and analysis to fix



## Keep your rolling stock on the move.

Technical Support & Spares Supply Agreement



## Smart Documents

### Centralized Online Manuals

Siemens is continuously looking at the latest technologies to incorporate in all aspects of our businesses including Rolling Stock Maintenance. We are utilizing Digitalized maintenance manuals and Digitalization for predictive maintenance and the future will continue to bring us new ways to make maintaining vehicles more effective for the maintainer. Siemens Smart Documents, an online digital tool is the newest in Siemens rolling stock maintenance technology that will prove to be a valuable resource in maintaining vehicles or fleet.

Siemens Smart Documents provides customers the ability to easily and quickly access up to date maintenance information and necessary vehicle documentation, in one location, from any computer or mobile device with an internet connection. Downloading necessary information to devices makes Siemens Smart Documents incredibly versatile to users that may be in an area where an internet connection is unavailable.

The new and improved table of contents can be viewed in two different layouts, allowing quick information. System and subsystem table of contents, as used in existing technical manuals, has been updated with a specific search feature. This allows searching at a local level within a specific section of component breakdown. The virtual table of contents allows for quick visual searching starting with a complete vehicle down to subcomponents.

Additionally, customization and merging of customers current digital information into Siemens Smart Documents secures all past documentation is available for future use.

Furthering the incredible functionality, user assigned access levels can be administered to provide information access on a user by user basis.



Table of Contents screen

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[usa.siemens.com/mobility](http://usa.siemens.com/mobility)