



The Global Language of Business

# Improving safety and efficiency in the rail industry

GS1 Application Standard for Manufacturing,  
Maintenance, Repair and Overhaul (MRO)



Today's rail industry is faced with mounting competitive and cost pressures that call for significant improvements in reliability, operating efficiencies and rail safety. Detailed risk management is becoming increasingly important— even mandatory due to current and upcoming regulations. Manufacturing, maintenance, repair and overhaul (MRO) processes have become more complex and global, with materials being sourced from all parts of the world.

The Swiss Federal Railways (SBB), Switzerland's largest railway system is convinced that critical to manufacturing and MRO processes is the ability to track assets and components and ensure interoperability between players and systems. SBB notes that the new GS1 application standard for rail will enable this and more. It is essential for a safer and more competitive rail industry.



More than 20 leading railway operators, manufacturers and solution providers have stepped up to develop this new application standard for rail.

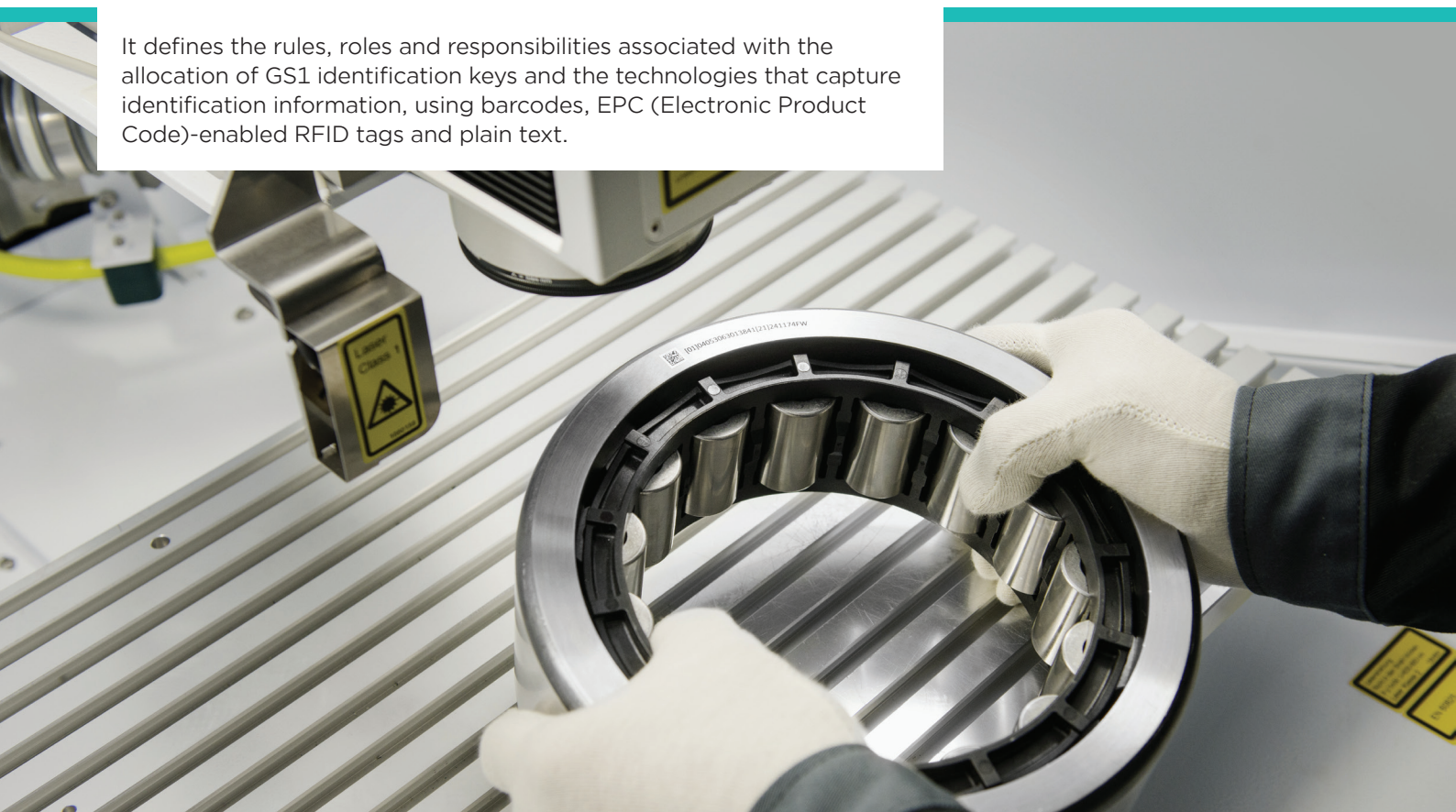
## Significant standard

More than 20 leading railway operators, manufacturers and solution providers have stepped up to develop this new application standard for rail.

The application standard, *Identification of Components and Parts in the Rail Industry*, is available for use by companies involved in rail manufacturing and MRO processes that aim to improve the performance and safety of their operations.

A collaborative effort with the GS1 community, the application standard provides detailed instruction on how to implement and use GS1 global standards for the unique identification, marking and management of MRO parts and components.

It defines the rules, roles and responsibilities associated with the allocation of GS1 identification keys and the technologies that capture identification information, using barcodes, EPC (Electronic Product Code)-enabled RFID tags and plain text.





## Considerable benefits

The unique identification of MRO parts and components will benefit industry players, their customers and travellers alike.

Rail manufacturers and operators can better manage risk combined with more efficient processes and increased competitiveness of rail services when compared to other modes of transport. For travellers and cargo owners, better alignment of MRO processes will lead to increased safety and reliability of railways, resulting in fewer delays.

Here are some of the ways that GS1 standards in MRO processes can deliver significant benefits:

- Enable condition-based maintenance that preserves parts and components at optimal times.
- Provide the foundation for safety transport of passengers and cargo information exchange among stakeholders.
- Deliver improved analysis and proof in case of safety-relevant incidents.
- Identify series faults more easily.
- Achieve more focused recall handling, with the identification of affected materials.
- Reduce inventory levels due to accurate and exact product tracking.
- Improve shelf-life management.
- Enable a collaborative forecasting and replenishment (CPFR) process
- Protect against counterfeit MRO items
- Validate easily the execution of work, resulting in fewer settlement disputes
- Provide easier warranty management due to common unambiguous maintenance history for MRO items

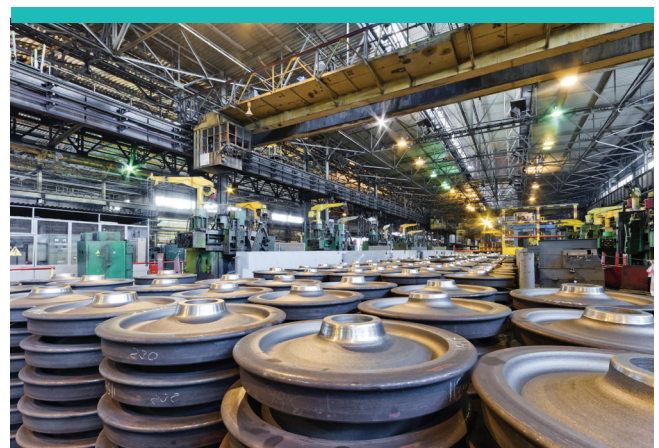
## Unique opportunity

Take advantage of the new application standard that was developed by members of the rail industry for the benefit of the industry.

SBB is convinced that the rail industry has a unique opportunity to increase their competitiveness in a global market filled with multiple options for transport and travel and that by leveraging this new application standard, together with other rail stakeholders we can achieve a higher level of safe, reliable and uninterrupted services for our companies, customers and passengers.

## Standards in action

HFG Transport Technik GmbH (HFG), a specialist in reconditioning roller bearings for rail vehicles, is using the new GS1 application standard for the bearings it manufactures and maintains. HFG laser engraves a GS1 DataMatrix barcode on each bearing containing the bearing's serialised GS1 Global Trade Item Number® (GTIN®). This allows HFG and all other handlers to quickly and unambiguously identify that individual bearing.



HFG and its clients can use this GS1 identification and marking approach to capture and share valuable information about the specific bearing's maintenance history, which, in turn, enables the company to more easily comply with regulations and improve its safety practices.

“The serialisation and marking of revised and refurbished items is a significant challenge, but also offers massive potential benefits. The use of GS1 standards enables us to realise that potential. Along with our customers, we are completely satisfied with the results.”

**Frank Wachendorf,**  
Sales Director, HFG

ContiTech, a manufacturer of tailored suspension systems, needed to efficiently produce and ensure that each customised system was built for and delivered to the right customer.

The solution: ContiTech now uniquely identifies each system by assigning and marking it with a serialised GTIN, encoded in a GS1 DataMatrix barcode on a durable label. As a result, ContiTech has significantly simplified its manufacturing and delivery processes by eliminating unnecessary customer-specific activities. The GS1 standards-based approach has also led to considerable reductions in costs and errors throughout the company's processes. It has also enabled the company's customers to quickly and accurately identify ContiTech suspension systems within their own processes, delivering substantial savings to customers as well.

“We fully understood the inefficiencies in our processes as well as the clear benefits for our customers when changing the way we work. The GS1 standards-based solution is a win-win for us and our customers.”

**Hendrik Neumann,**  
Logistics Manager PMS CRE, ContiTech

## Get on track

- Download the standard today: [Identification of Components and Parts in the Rail Industry – Application Standard](#).
- Learn more: Visit: [www.gs1.org/rail](http://www.gs1.org/rail) or contact Jaco Voorspuij, Senior Manager, Industry Engagement, GS1 at [jaco.voorspuij@gs1.org](mailto:jaco.voorspuij@gs1.org)



## About GS1

GS1 is a neutral, not-for-profit, global organisation that develops and maintains the most widely used supply chain standards system in the world. GS1 standards improve the efficiency, safety, and visibility of supply chains across multiple sectors. With local Member Organisations in over 110 countries, GS1 engages with communities of trading partners, industry organisations, governments, and technology providers to understand and respond to their business needs through the adoption and implementation of global standards. GS1 is driven by over a million user companies, which execute more than six billion transactions daily in 150 countries using GS1 standards. [www.gs1.org](http://www.gs1.org)

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