

## Position Paper of the Technical Innovation Circle for Rail Freight Transport – Summary

### Focusing on the rail system

#### From the innovative freight wagon to the intelligent freight train and a competitive rail freight transportation system

Low-noise, Lightweight, Long-running, Logistics-enabled, Life-cycle-cost-oriented – the freight wagon of the future will be arriving soon. With its concept of a 5L demonstrator train, the Technical Innovation Circle for Rail Freight Transport (TIS) has successfully stimulated new ideas in the innovation process. The project is now ready to take the next step: combining these innovative freight wagons into intelligent freight trains.

##### » New approaches to innovation must focus on the freight train as a whole

To make rail freight transportation competitive in the long term, digitisation and automation strategies must be developed for the entire train. This is the only way to deliver sustainable productivity gains. Time-consuming and expensive manual tasks still play a significant role in the sector – reducing its competitiveness compared to other modes of transport.

##### » The automatic coupling: a module for digitisation and automation

The introduction of an automatic coupling with integrated power and data bus lines is one of the most important elements in the process. This type of digital automatic coupling (DAC) will support the many innovations required to make rail freight transportation more efficient – such as automated brake tests and train marshalling, and condition-based maintenance.

The position of TIS is therefore clear: the Europe-wide introduction of a digital automatic coupling must be made a top priority. The conditions for its introduction are favourable: technological advances mean the focus is no longer solely on improving the occupational health and safety of shunting staff or increasing the productivity of shunting operations. Today, it can be used to implement a wide range of additional benefits.

##### » A sectoral challenge in need of political support

The sector must develop a migration strategy for the introduction of a digital automatic coupling and implement it in the medium term. This includes the agreement of a uniform, Europe-wide DAC as well as an energy and data management standard for freight trains. The shippers, wagon owners, railway companies, wagon manufacturers and suppliers participating in TIS have taken up this challenge. However, the process of introducing a digital automatic coupling seamlessly across a continent is both complex and financially challenging. Without broad political support at the national and European levels, it will be difficult to accomplish. The high procurement and conversion costs make financial support an absolute necessity.

##### » The rail freight sector needs an integrated approach for growth

Intelligent freight wagons in intelligent freight trains will play a major role in making rail freight transportation fit for the future. But it is also clear that improvements in the underlying conditions for rail freight transport and a level playing field for competition between the various modes of transport are needed in addition to the promotion and implementation of innovations. The master plan developed jointly by the sector and political organisations shows how this can be accomplished. An integrated approach will be essential to enable rail freight transportation to compete effectively in the future.

## **Technical Innovation Circle for Rail Freight Transport:**

### **About us**

The following companies are currently participating in TIS as part of a practice group: DB Cargo AG, Ermewa SA, GATX Rail Germany GmbH, Knorr-Bremse Systeme für Schienenfahrzeuge GmbH, SBB Cargo AG, VTG AG, Waggonbau Graaff GmbH, WBN Waggonbau Niesky GmbH, Wascosa AG.

TIS – as the sector's practice group – has set itself the goal of initiating and implementing practical innovations for innovative freight wagons and intelligent freight trains. It pursues an integrated approach with a focus on the cost-effectiveness of basic innovations for rail freight wagons. As a result, in addition to wagon owners, TIS brings together rail transportation companies, shippers and companies in the wagon construction and supply industry. The wagon owners in TIS are fundamentally willing to incorporate basic innovations into newbuilds and existing fleets.

### **Contact information for the Technical Innovation Circle for Rail Freight Transport:**

Further information can be found on the TIS homepage: [www.innovative-freight-wagon.eu](http://www.innovative-freight-wagon.eu)

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