



Ministry of Transport position regarding DAC - Digital Automatic Coupler

We see the introduction of the Digital Automatic Coupler (hereinafter referred to as DAC) as one of the tools for increasing the efficiency and effectiveness of rail freight transport within the European rail system, the implementation of which depends on resolving a number of fundamental issues and finding consensus across the sector. The MoT understands that it is necessary to ensure the conditions for shifting freight from road to rail in line with EU strategic documents. However, it is always necessary to consider the economic cost and added value for those who will be responsible for implementing measures in the transport system.

The introduction of DAC must lead to an increase in the competitiveness and safety of rail transport in relation to other modes of transport, which is not clear as of now. **It is therefore essential for the eventual transition to DAC that all outstanding issues are resolved and that there is a final and workable technical solution for DAC that has been sufficiently tested in commercial rail freight operations.** Without the above, it is not possible to set dates for a prospective future "big bang" or other type of DAC roll-out on the rail freight market.

To address some of the above DAC areas it is absolutely necessary:

1. Technical aspects

- 1) **To complete the technical development** on the side of the rolling stock (vehicles), including the traction vehicles and related infrastructure elements, and **clearly define the final standards for one target version of DAC**, including the completion of the design and development of data transmission and electro-pneumatic brake of the straight type. These standards need to be reflected in the relevant TSI Regulations and their technical annexes so that new vehicles from a certain date onwards are DAC-ready, while ensuring that older vehicles not equipped with DAC can be retrofitted in a cost-effective way, but not made mandatory until the end of their economic life.
- 2) Evaluate the technical aspects when introducing DAC with **respect to axle load** on main lines and connecting or bypass lines, as current vehicle designs are at maximum values of weight-per-axle bearing on the track.
- 3) **Test and validate DAC in real operation** and identify possible negative impacts of frequent coupling and uncoupling and other operational situations for both EU and non-EU crossing traffic flows. Operational validation of DAC Type 5 including evaluation of all necessary functionalities (not only coupling) for rail freight transport should be ensured.
- 4) Respect the introduction of DAC in a form that creates **prerequisites for the full use of the effects of its functionality** (electro-pneumatic brake, remote selective uncoupling, vehicle diagnostics, etc.).

- 5) Apply DAC primarily to new vehicles, **including traction vehicles, as part of their production** (engineering, testing and approval within the manufacturer's competence) and retrofit as optional and only in cases where there is a clear and tangible benefit for the vehicle owner and the carriers.
- 6) If DAC is introduced and operated, prepare the infrastructure for this step, including implementation technology.
- 7) Ensure that there is **sufficient expertise** for the new DAC technology, both in the production of the DAC and its maintenance. With a longer time horizon, the DAC rollout can be prepared for.
- 8) Effectively set up a system of DAC maintenance and technical inspections related to the operation of DAC in railway traffic, including the provision of technologically proficient personnel to carry out DAC maintenance.
- 9) Ensure the operation of DAC in vehicles from third countries and their interoperability within the EU rail system.

2. Migration plan

Main points:

- 1) A **realistic migration plan**, which will be the result of a consensus of the stakeholders involved in rail freight transport (mainly carriers, vehicle owners, infrastructure managers) **is essential**.
- 2) **Clearly define** in the relevant Regulations (TSIs) **the migration from UIC to DAC couplings**, including rules for exemptions and the approval process for retrofitting older vehicles, which must be optional for existing vehicles and allow their use with UIC couplings.
- 3) Clearly define fitting of DACs on new vehicles with at least the functionalities of the given type 5.
- 4) Big bang as a solution can only be introduced at an advanced stage of the migration with the agreement of all carriers involved.
- 5) In addition to the scenario of a rapid, widespread migration of EU railways to a new single coupling standard in the form of DAC, an alternative scenario of long-term coexistence of the three coupling standards must be developed:
 - a. DAC
 - b. DPC (Digital Semi-Permanent Coupling – a low-cost, robust solution, suitable for internal coupling of groups of wagons for block trains, outside the group equipped with DAC)
 - c. UIC coupling

Justification:

The migration plan should be based on a consensus of all actors directly involved in the rail transport process. Although the widest possible deployment of DAC will maximise the benefits, without additional or adapted infrastructure its effects will be very limited and a widespread deployment in the initial phase on all / most wagons in the EU may not necessarily result in the desired effect, i.e. in many cases the benefits may not outweigh the associated costs. This applies in particular to existing fleets not suitable for retrofitting to DAC or other specific cases.

The migration plan should not devalue the investments already made in the existing rolling stock. On the contrary, it should allow the maximum benefits of DAC to be enjoyed for as long as possible during the lifetime of the vehicles. Therefore, we consider it necessary to start the actual migration phase only after the main technical issues have been resolved, so that ideally a Type 5 DAC will be available at the time of the start of the migration phase.

We consider it advisable to gradually deploy DAC-equipped vehicles on selected operating branches where its main benefits can be exploited: fast coupling/decoupling, automated brake testing or precise train stopping. High-speed scheduled services with load changes at defined intermediate stations outside the main formation yards would be a perfect setting, so as not to affect normal train formations with UIC-coupling vehicles.

Expansion to a single wagon load system should be left until the necessary number of DAC vehicles are available, also to minimize the need for mixed traffic.

3. Involvement of public funding

- 1) The MoT is ready to support the introduction of DAC in individual projects in the current programming period, in accordance with the applicable legislation and public support rules, primarily for the purpose of verifying the necessary functionalities.
- 2) **To ensure widespread implementation of DAC, it is necessary to define clear and guaranteed funding from the EU level**
 - a. Extension of Commission Regulation (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in accordance with Articles 107 and 108 of the Treaty, as amended (the "**Block Exemption Regulation**"), to include the area of compatibility relating to support for energy efficiency investments in rail transport, so that the areas set out in Regulation (EU) No 651/2014 take into account the objectives of the Green Deal and ensure the necessary consistency with the climate targets set for 2030 and 2050;
 - b. Ensure the maximum intensity of support in line with public support rules and set very clear funding rules in line with market demand;
 - c. In order to maintain at least some control over the cost-effectiveness of the funds spent, it is advisable to set a fixed amount of subsidy per vehicle converted; so that the introduction and operation of the DAC does not lead to a further increase in additional costs for carriers and vehicle owners, both investment and operating.