

**PRIME Meeting
24 June 2021**

**Information point:
European Digital Automatic Coupler (DAC) Delivery Programme**

From: EC

– For Information –

1. OBJECTIVES AND BACKGROUND

Most of the world has long benefited from automated couplers for freight vehicles, allowing rapid and efficient assembly of trains, higher capacity (longer trains) and greater worker safety. This “innovation” was never introduced in Europe since continent wide deployment would be needed, but could never be agreed.

If single wagon freight is to survive and prosper – as we all want in order to deliver the European Green Deal – we urgently need it now. Many member states support this, and the Commission is working with Shift2Rail, the rail undertakings and manufacturers on finalising specifications and a migration plan for this, via the European DAC Delivery Programme (EDDP).

For a successful and effective implementation of DAC, it is of crucial importance to have efficient cooperation between railway undertakings, infrastructure managers and wagon keepers, as well as the rail supply industry, entities in charge of maintenance, concerned sector organisations, rail research centres and national and European political institutions. The key objective of the EDDP is to retrofit a majority of Europe’s freight wagons – indicatively between 450 000 and 500 000 of them – so that they can couple automatically by 2030 at the latest.

The overall objective of EDDP is a wide rollout that is technically and economically feasible. In 2021, we plan to select an open, operationally tested and safe European model ready for industrialisation and deployment, and to incorporate its requirements in the updated technical specifications for interoperability.

The EDDP will have to provide a commonly agreed single standard DAC technology, an ambitious migration plan respecting the different regional conditions in Europe and, most importantly, a common understanding of use cases, benefits and costs, as well as addressing the needs for funding and financing instruments.

Background DAC will deliver its performance boost for rail freight in particular through accelerated handling processes in marshalling yards, as well as permitting longer trains and the introduction of the ep-brake to freight trains. It will also support end of train devices, providing train integrity verification for ETCS level 3 and potentially allowing removal of trackside assets.

These all require a data and energy connection between the wagons of a freight train and the Digital Automatic Coupler (DAC) to replace the old screw couplers on the vehicles. **During the replacement – or “Migration” - period, more infrastructure capacity might be needed all over Europe due to the incompatibility of the screw coupler and the DAC.**

2. WHY SHOULD INFRASTRUCTURE MANAGERS PARTICIPATE IN THE EDDP?

Opportunities:

- Substantial capacity gains in marshalling yards and reduction of required resources;
- Higher line capacity gains due to more harmonised/higher speeds and increasable train length;
- High network capacity gains by ETCS Level 3 moving block operations enabled by DAC (train integrity function);
- Increased workers' safety in marshalling/shunting;
- Sustainable employment opportunities and a more attractive workplaces.

Risks:

- Specific conditions of IMs' business not taken into account;
- A migration plan that does not suit IMs' needs;
- New requirements for shunting and train preparing/operating staff and workers' safety;
- New operational rules;
- Lack of interoperability ("technical islands"), incompatibility of rolling stock, business disruptions;
- Need to retrofit buffer stops.

3. INDICATIVE MIGRATION STRATEGY AND NEXT STEPS

Within the EDDP, the Work Package 3 is dealing with the topic "Migration". According to an indicative and preliminary planning starting from now on (2021), migration will probably start in 2024 and consist of three phases:

- A pre-phase in 2024 and 2025 where commercial pilots will be carried out;
- A core-phase in 2026 and 2027 for retrofit of the high-performing fleet;
- A completion phase from 2028 to 2030 dealing with finalization of the retrofiting.

Depending on the concerned traffic segments, the retrofiting phase might have a significant negative impact on operations and path availability to a different degree.

Preparatory work for the migration phase has already started in Work Package 3 of the EDDP. Among the participants, experts from Railway Undertakings are well represented, while **experts from Infrastructure Managers are urgently needed** because their planning perspective does not match with that of Railway Undertakings. In addition, the European coverage has to be extended so as to optimise the migration phase for the greatest possible number of Infrastructure Managers.

Infrastructure Managers are therefore invited to actively contribute to Work Package 3 of the EDDP by nominating experts who are familiar with:

- capacities/processes in marshalling yards;
- capacities in all rail freight stations (from single track siding to marshalling yard incl. border crossing stations).
- corridor capacities and planning incl. larger maintenance closures/capacity reductions until 2030.
- Furthermore, representatives who have a multi-network vision (like for Rail Freight corridors) would provide great added value;

Link of S2R website for nominations:

<https://ec.europa.eu/eusurvey/runner/DACIdentificationGridforOperation>

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