Ondersteuning ministerie van Infrastructuur en Waterstaat 'Joint Declaration of Intent (JDOI) German-Dutch cooperation on cross-border rail freight' (Zaaknummer 31190118)

Eindrapportage

Panteia

Ondersteuning ministerie van Infrastructuur en Waterstaat 'Joint Declaration of Intent (JDOI) German-Dutch cooperation on cross-border rail freight'

Eindrapportage

Author
Chris Wensink

Client
Ministerie van Infrastructuur en Waterstaat

Date
Zoetermeer, 3-12-2024

Project
11208

Inhoud

1 Introductie

Conform offerte en opdrachtbrief voor verlenging van de voorgaande opdracht (2023-2024) begeleidde Panteia de ministeriële samenwerking binnen de JDOI inzake spoorgoederenvervoer tussen Duitsland en Nederland. De werkzaamheden vingen aan per 1 mei 2024. In deze eindrapportage brengen wij verslag uit van de uitgevoerde werkzaamheden.

Met betrekking tot de JDOI heeft het ministerie van IenW behoefte aan hoogwaardige, praktische ondersteuning. De samenwerking met Duitsland is essentieel in het bereiken van de doelen voor het spoorgoederenvervoer. De ondersteuning is daarom niet alleen gericht op rapportages, organiseren van meetings, e.d., maar bovendien op het faciliteren van de interactie en progressie, op basis van de JDOI onderwerpen en wat er in de sector aan beide zijden van de grens leeft. Een uitdaging is daarbij om niet alleen op ministerieel niveau samen te werken, maar om alle actoren (ondertekenaars van het Convenant) erbij te betrekken.

De onderstaande tabel geeft een overzicht van de activiteiten tussen 1 mei en 30 november:

Deelactiviteit	**Omschrijving**	**Status**
1. Programmamanagement	Het programmamanagement overziet de uitvoering van het gehele programma, ondersteunt de organisatie van de meetings in nauwe samenwerking met de opdrachtgever en stakeholders, en is verantwoordelijk voor de inhoudelijke projectrapportages.	Afgerond
2. Werkgroep en high-level meeting	Voorbereiden, organiseren en verslaan van de JDOI-werkgroep en high-level meeting.	Afgerond
3. Rapportages	Naast de voorbereiding van de bijeenkomsten worden tussentijdse rapportages per JDOI-deelproject opgesteld. De ondersteuning van de JDOI wordt afgesloten met een eindrapportage.	Afgerond met deze eindrapportage
4. Aanjagen projecten	Nieuwe initiatieven verkennen en waar mogelijk aanjagen.	Afgerond. Vervolg kan worden gegeven in de voorbereiding van de JDOI 2025.
45. DAC demotrein	Coördineren van de voorbereidingen voor de demonstratie met de DAC demonstratortrein tijdens de Duits-Nederlandse bijeenkomst.	Afgerond

2 Doorkijk naar 2025

De voorbereidingsfase van de jaarlijkse bijeenkomst in 2025 (die buiten de huidige opdracht valt) zou kunnen worden aangevangen met de volgende acties:

- Beoordeling, herevaluatie met IenW over gewenste uitkomsten JDOI eind 2025;
- Terugkijkgesprek samen met BMDV over de JDOI bijeenkomst 2024 en het eventueel opvolgen van in 2024 geïdentificeerde opties voor nieuwe initiatieven.
- Vervolg helpen geven aan (nieuwe) initiatieven die tijdens de bijeenkomst op 21 oktober geïdentificeerd zijn
- Samen met BMDV bepalen van het format voor 2025.
- Eventueel kan vroeg in het proces in 2025 een informele bijeenkomst worden gehouden met de Nederlandse stakeholders.

Als bijlage zijn in deze eindrapportage opgenomen:

- JDOI-projectoverzicht (oktober 2024)
- Verslaglegging JDOI-meetings 21 oktober 2024
- Paragraaf met mogelijke nieuwe initiatieven.

Bijlage 1 - Projectenoverzicht

Joint Declaration of Intent (JDOI)
German-Dutch cooperation on cross-border rail freight

Arbeitsgruppe project brief

Den Haag, 21 October 2024

Introduction

Traditionally, the actors in German and Dutch rail freight transport have relied heavily on each other: operationally, commercially and policy-wise. In 2019, Germany and the Netherlands signed a joint covenant, known as the Joint Declaration of Intent (JDOI), agreeing to cooperate closely in the field of rail freight transport. Over the past five years, the German-Dutch cooperation has been further shaped.

As mutual contacts have been strengthened, a number of projects and initiatives have come to fruition. There is also coordination at the operational level, for example where the availability of train paths is concerned (on a daily basis via the Grenzdisponent in Duisburg, now managing all three main border crossings, but also by developing an annual schedule for closures and restrictions stemming from the Third Track construction).

The JDOI working group (Arbeitsgruppe) has met nine times since the start of the initiative, the high-level JDOI meeting, under the auspices of the two state secretaries, five times. These different meetings are dedicated to the progress of the JDOI and individual projects and served to further enhance the cooperation. Today, 21 October 2024, the German and Dutch state secretaries will have their annual meeting in the JDOI format. With this meeting they reaffirm their determination to continue close cooperation to improve rail freight transport between the two countries.

The JDOI comprises a shared project agenda, with implementation of a number of projects already finalised. The projects focus on technological innovation, cooperation and transparency in the transport chain and improving efficiency. Moreover, all projects are conducted by partners from both the Netherlands and Germany. In the next sections, an overview and brief descriptions of the ongoing JDOI activities are given.

Over the years, other activities have been finalised. Either because the topic was fully elaborated or due to efficiency reasons projects were closed or merged into other initiatives. Finalised topics include studies (e.g. on the implementation of 740m trains, network resilience or multimodal strategy) and platforms that have delivered on their aims (e.g. harmonisation of brake sheet calculation). Although in specific cases follow-up initiatives may be envisaged, this reflects the progress concerning the JDOI. An overview of finalised projects is provided in section 4.

Overview of ongoing initiatives

The JDOI focuses on five themes:

1. Operations resilience / enhanced efficiency of network utilization;
2. Digitalisation and automation;
3. Interoperability and harmonisation;
4. Multimodality;
5. Financing and cooperation on national and EU levels.

At present, the JDOI facilitates and supports the key initiatives summarised in the following table:

Theme	Cluster	Project	Lead
1. Operations resilience / enhanced efficiency of network utilisation	1.1 Safeguarding freight traffic operations on all available cross border routes linking origins to destinations. Common network resilience management.	Development of Translation tool for GSM-R (KITT)	DB InfraGO AG
		Cooperation group on Third Track (ABS 46/2)	ProRail, DB InfraGO AG, IenW, BMDV
2. Digitalisation and automation	2.1 Development of rail freight based on technological innovations	Automatic Train Operation on the Betuweroute ("ATO Betuwe")	DB Cargo AG
		Digital Automatic Coupling (DAC)	DB AG
		Pilot automation container transport shuttles (INDIGO+)	TNO
	2.2 Digital interfaces between railway undertakings, rail freight customers/combined transport operators, infrastructure managers, terminal/access point operators and maintenance providers with information on train status and ETA	Enhanced Data Interoperability for Combined Transport (EDICT)	UIRR
		Pilot Rail Freight Data Hub (RFDH)	INFRA Dialog Deutschland
3. Interoperability and harmonisation	3.3 Enhanced coordination of cross-border traffic with intensified cooperation between traffic control centres and taking full advantage of border dispatchers at DB InfraGO and ProRail traffic control centres	Enhanced coordination of cross-border traffic with intensified cooperation between traffic control centres and taking full advantage of border dispatchers at DB InfraGO and ProRail traffic control centres (Grenzdisponent)	ProRail, DB InfraGo AG
4. Multimodality	~	(Initiatives completed)	
5. Financing and cooperation on national and EU levels	5.1 Joint expert group on funding	ERTMS on-board unit (OBU) financing	IenW

Brief project descriptions

1. Operations resilience / enhanced efficiency of network utilization

Development of Translation tool for GSM-R (KITT)

DB InfraGO AG is preparing a language pilot (use of translation software within GSM-R instead of B1-language competence of drivers). The project is focusing on German-French but could be extended to German-Dutch later. This year a tablet-app for driver-driver communication has been tested during Rastatt-Rerouting. Currently communication-apps are only allowed to be used in standstill (when trains are not running).

Cooperation group on Third Track (ABS 46/2)

This cooperation between the German and Dutch ministries and infrastructure managers is aimed at safeguarding freight traffic operations between Zevenaar / Emmerich and Oberhausen during construction works on the route ABS 46/2. Discussing political and societal issues regarding freight traffic operations during construction works ABS 46/2. ProRail and DB InfraGo have meetings on a regular basis and occasionally BMDV and IenW are involved. The IMs monitor the coordination on building planning and diversions for the complete building phase. They will also make decisions about relevant measures if necessary. DB InfraGO is now working on several locations. This cooperation will continue until ABS 46/2 is completely in operation.

In close cooperation with DB Betrieb and ProRail Traffic Control the development of the enhanced hand-over of trains across the border is currently ongoing. The 80-week construction period starts in November 2024. Although freight traffic has not grown as expected, the logistics still remains a point of focus during this period. A single-track operation makes the system vulnerable and all parties need to focus on adequate handling in the event of disruptions. The 80-week period has already resulted in a stronger collaboration between DBInfraGo and ProRail.

2. Digitalisation and automation

Automatic Train Operation on the Betuweroute ("ATO Betuwe")

The project objective is to get fully functional and operational testing of ATO target systems on two DB Cargo locomotives in order to achieve first-in-class certification, boosting growth of combined transport from the ZARA ports via Betuweroute by 2026. ATO is key to improve resource productivity, capacity utilisation and energy efficiency for growth on the corridor, production stability, reduced cost and transit times. The development of ATO will require various innovations at production process and technology level. The consortium will also rely on proven, state of the art automation technology, while building on the European standardisation. In 2024 the sensor data collection and analysis will be completed, as the analysis of driver tasks and functional requirements, and the analysis of working space requirements, process, human machine and working procedures. At the time of the JDOI meeting on 21 October 2024, parties are awaiting decision making on the German side and after that final granting of the subsidy to ProRail.

Digital Automatic Coupling (DAC4EU)

The project goal is testing and demonstrating the Digital Automatic Coupler for Rail Freight Traffic in Europe. After testing the operational DAC system ready for service in Phase IV, the project was extended until June 2026. Currently in Phase V components are being tested and validated in order to start operational testing in real environments in Phase VI. In addition, the approach for regional / European roll out planning including financing is critical for the success of the project. DAC as a topic is part of the recent CEF call. Europe's Rail Joing Undertaking's initiative of 100 pioneer test trains will help in further operational experiences related to DAC.

Pilot automation container transport shuttles (INDIGO+)
A pilot dedicated on automated train preparation and breaking process (automatic brake testing (ABC), way side train monitoring (WTM), and digital automatic coupling (DAC). The project includes process integration, an impact evaluation (scenario development, baseline measurement, KPI development & elaboration, business casting and societal impact assessment) and optimising process chain digitalisation. The feasibility phase was concluded beginning of 2024, the next step is the functional design and the set-up of a living lab on the corridor Rotterdam – Aachen (via Venlo). Proposal for next step funding is foreseen in the BO-MIRT (*Bestuurlijk Overleg-Meerjarenprogramma Infrastructuur, Ruimte en Transport* / National Policy Strategy for Infrastructure and Spatial Planning) of October 2024.

Enhanced Data Interoperability for Combined Transport (EDICT)
EDICT is a sequel to the projects ELETA (2017-2019), Digital Train 1.0 (2020-2021) and Digital Train 2.0 (2021-2022). Its chief aim is to facilitate the implementation of electronic ETA data exchange (TAF TSI) between terminals and the rail sector. The project has three components:

- Activity 1: Implementation of electronic data exchange between terminals and the rail sector
- Activity 2: Development of a common quality management system for European combined transport (Q-ELETA)
- Activity 3: Initiating data exchange with (new) identifiable and eligible stakeholders (upgrade CESAR)

Process Optimisation through ETA-Management in Intermodal Transport (ProMi)
The project aims at improving the interaction of the main components and actors in intermodal hinterland transport: seaport terminal (transhipment, intermediate storage, customs clearance if necessary), railway operator (main transport leg), hinterland terminal (transhipment, shunting processes, potential interim storage) and trucking company (Loading Unit Delivery /Pickup). The project's goal is linking all transport chain actors of different intermodal rail connections via a central and neutral platform, thereby managing information on orders and operational processes (status information and ETA forecasts) as well as ensuring an automated data transfer from one partner to the next and along the transport chain. As part of the project, it will be examined how operational processes can be optimised through the use of accurate and quality-controlled ETA forecasts. The project was finalised in May 2024. All tasks completed, namely: requirements analysis + technical concept + data interfaces and analyses + prototype development

Pilot Rail Freight Data Hub (RFDH)
Development and operation of the central use cases of the RFDH platform based on the minimum viable product (MVP) developed and tested in the preliminary project. Establishment of the company based on the business case developed in the preliminary project and the contractual regulations of cooperation between the RFDH platform company, the data providers and the data users, which were also developed there.

3. Interoperability and harmonisation

Grenzdisponent for all the borders NL-DE
Primary goal of the project is to develop and implement new operational procedures between IMs to get adequate logistic information so trains can run in a smooth, stable and transparent manner between DB InfraGO and ProRail. Secondary goal of the project is to stimulate a further active cooperation between DB InfraGO and ProRail.

Over the course of the last year the project has seen a transition to a more 'natural' cooperation initiated and maintained from the operational assignment and the relevant connected development. Within GD2.0 several actions identified within in the project are

being pursued to finish the scope of the project. These actions focus on a new (changed) operational process, increased exchange of relevant (operational) information and intensified exchange of knowledge and experience between operational colleagues. Within the QCO program a stable form of exchange with RUs has been achieved and is being maintained for both RFC1 and RFC8. As a continuous thread through the program there is increased effort to enhance the reports that are being used to measure performance on the border-section of the corridor. For the 80-weeks closure on RFC1 a special QCO is being prepared on a weekly basis to help address specific international issues and to position IMs and RUs to be able to quickly address and solve these issues.

4. Multimodality

Initiative completed: Paradigm shift for the rail on the Rotterdam – Ruhr corridor. The objective was to identify and assess technological possibilities and innovative concepts that can shape rail operating and business models, aiming at contributing to a required paradigm shift for the rail sector to improve the competitive position.

5. Financing and cooperation on national and EU levels

ERTMS on-board unit (OBU) financing
Aligning on relevant topics to the ERTMS rollout on a ministerial as well as program level. Currently, working groups are working together to align their approaches and learn from each other's experience, and to explore where both countries can join forces and bring best practices to EU level. An updated analysis of the differences between both networks and joint recommendation of topics suitable for harmonisation between both networks has been produced this year (in Q3).

Overview of closed initiatives

During the years other activities have been finalised, either because the topic was fully elaborated or due to efficiency reasons projects were closed or merged into other initiatives. Closed JDOI initiatives are summarised in the following table:

Theme	Cluster	Project	Lead
1. Operations resilience / enhanced efficiency of network utilization	1.2. Contingency management in case of severe disturbances in the logistic chain, including the occurrence of extreme water levels in the Rhine	Study "Rail as contingency modality in periods of extreme water levels": improving daily operations ProRail and DB InfraGO	Port of Rotterdam
2. Digitalisation and automation	2.2 Digital interfaces between railway undertakings, rail freight customers/combined transport operators, infrastructure managers, terminal/access point operators and maintenance providers with information on train status and ETA	Pilot bimodal railrunner technology	GoMultimodal
		Process Optimisation through ETA-Management in Intermodal Transport (ProMi) finished 5/2024	Fraunhofer IML
	2.3 Acceptance of systems for remote monitoring regarding the condition of running trains	Open standard for WTMS data-exchange - Wayside Train Monitoring System (project suspended)	ProRail, VTG
3. Interoperability and harmonisation	3.1 Accelerated start of 740 m trains on cross-border routes	Study 'Monitoring status longer 740m trains' (topic may be reopened for update / comparison of status and implementation strategies in both countries)	Panteia
	3.4 Enhancing interoperability by harmonisation of operational regulations and administrative procedures. E.g. cross-border authorisation of rolling stock, use of languages in cross-border operations, cross-acceptance of professional qualifications such as wagon inspector and shunter, which are not yet harmonised at EU level	Harmonisation of braking calculations and documentation	DB Cargo
4. Multimodality	4.1 / 4.2 Common initiative on strategic vision and measures on development of multimodality and single wagon load traffic.	Paradigm shift for the rail on the Rotterdam – Ruhr corridor	TNO / Port of Rotterdam

Detailed updates of ongoing projects

JDOI Project-Cluster

Project cluster:	**Part of JDOI Activity:**	**Organizations involved:**	**Reporting for JDOI:**
Common initiatives to enhance seemless border traffic between DE - NL	1 (*Operations Resilience and efficiency*)	DB InfraGO / ProRail	DB InfraGO: S. Rosca ProRail: P. Aaldring

Specific Activities within Cluster:

#	*Title*	*Description*	*Contact*	*Main activities*	*Development since last JDOI WG*	*Issues (e.g. Risks / Financial Needs / Links to other projects etc.)*	*Start – End*
3	**Development of Translation tool for GSM-R**	DB InfraGO AG is preparing a langauge pilot (use of translation software within GSM -R instead of B1-language competence of drivers). The project is focussing on German -French but could be extended to German -Dutch later	Marvin Christ +49 1523 756 1562 Marvin.christ@deutschebahn.com	Prototype "KITT" is being tested in German -French cross border sections	• Technical improvement • Aiming in language pilot accoring EU-dir 2019/554	Project could be extended to a German -Dutch language pair in the future	2019-25
				Test as a tablet -App for driver -driver communication while Rastatt -Rerouting Diesel -Shuttle	• Additional project scope	Currently Communication -Apps are only allowed to be used in standstill	01/2024 – 09/2024

JDOI Project-Cluster

Project cluster:	**Part of JDOI Activity:**	**Organizations involved:**	**Reporting for JDOI:**
Common initiatives to enhance seemless border traffic between DE - NL	Safeguarding freight traffic operations on all available border crossing and with special attention to traffic during construction works (ABS46/2)	DB InfraGO / ProRail	ProRail: Renske Breevoort

Objectives and General Status

- Enhancing seamless border traffic between Germany and the Netherlands is a major necessity in order to enhance sector competitiveness and efficiency of capacity usage. Activities within this cluster are mainly at the intersect of cross-border operations and timetabling procedures. Nevertheless, there is also a close linkage to cross-border infrastructure development as a technical pre-condition.

Specific Activities within Cluster:

#	*Title*	*Description*	*Contact*	*Main activities*	*Development since last JDOI WG*	*Issues (e.g. Risks / Financial Needs / Links to other projects etc.)*	*Start – End*
3	**ABS46/2**	Daily operations	ProRail: Martijn Meegdes	Enhancement	The updated schedule foresees a finished implementation late spring 2024 and ensures a more stable and reliable control of traffic between ProRail and DB InfraGO.		Q2 2024
					In close cooperation with DB Betrieb and ProRail Traffic Control the development of the enhanced hand-over of trains across the border is ongoing.		
		80 week period	ProRail: Renske Breevoort	Overall	The 80-week period starts in November. Although freight traffic has not grown as expected, the logistics still remains a point of focus during this period. A single-track operation makes the system vulnerable and all parties need to focus on adequate handling in the event of disruptions.	NA	Q4 2024 Q2 2026 (and onwards)
					The 80-week period has resulted in a stronger collaboration between DBInfraGo and ProRail.	NA	
				Avoid simultaneous closure of border crossings	On going: In the BeNeDe Group process to prevent simultaneous closures On going: Monitoring and assess whether the agreements (from the BeNedDe Group) are applied during the allocation and operation phases.	NA	
				Contingency management	On the 15 October there will be a pilot (on the Dutch corridor near Venlo – a.k.a. Brabantroute –) to test whether the measure on contingency management are effective (e.g. sort out the effectiveness of the measures that have been devised) and whether they need adjustment or improved.		

JDOI-projects

Project name: Automatic Train Operation on the Betuweroute ("ATO Betuweroute") **Part of JDOI activity:** Immediate action 1, Initiative 2.1	**Project lead:** DB Cargo AG /ProRail	**Starting date:** October 2021 **To be completed by:** Q2 2027

Organizations involved: RUs: DB Cargo D/NL IMs: ProRail, DSD (DB InfraGO) Research institute: DLR Vehicle/System OEM: Hitachi / REMOOT Assessor: Ricardo Rail Certification Authorities: ERA, EBA, ILT	**Project objective:** One-year fully functional and operational testing of ATO target system to demonstrate the technical applicability under real operating conditions on the Betuweroute between Kijfhoek and Valburg in order to deliver robust freight ATO spec for procurement and rollout purposes. **Project deliverables:** **D1:** Deliver specification and prototype for ATO GoA 2, Remote Supervision & Control System and GoA 4 perception system **D2:** Deliver 1-year operational testing for ATO over ETCS in rail freight on Betuweroute together with ProRail **D3:** Deliver study for ATO freight application for commercial operation

General status

Project implementation: Supplier selection for ATO Onboard and RSC was made in October 2022. The contracts were signed in December 2022. The suppliers have passed the first three quality gates (planning, concept & intermediate design). A converted ATO locomotive will be ready by the end of 2024. ATO Trackside specification and concept are ready. Operational concepts are delivered.

Risk Netherlands: Dutch funding has not yet been made available due to the DB internal review of the project.

Project phase / tasks	Status now	Status last meeting	Responsible	Duration	Explanation, next steps/actions
WP1: AI/Sensor data collection/analysis			DB	10.21 – 12.25	Data collection is being executed.
WP2: Analysis of driver tasks & functional requirements			DB	10.21 – 06.27	Initial specification are finalized and are currently in design with the supplier, final design expected Q4 2024
WP3: Analysis of working space requirements, processes, human machine interface and working procedures			DB	10.21 – 06.27	Initial specification are finalized and are currently in design with the supplier, final design expected Q4 2024
WP4: ATO On-Board and Remote Supervision Control (RSC) System Design			Industry	04.22 – 12.24	Implementation of the technical solution of ATO system and RSC by industry supplier
WP5: Vehicle integration and admission for test operation			Industry	07.23 – 05.25	Mounting of ATO system on two locomotives and admission for complete ATO system for testing phase
WP6: ATO/Remote Control Center test phase			DB	06.25 – 06.26	One year operational test phase on Betuweroute
WP7: Project Management			DB	10.21 – 06.27	Technical, financial and organizational coordination of the project

JDOI-projects

Project name: Automatic Train Operation on the Betuweroute ("ATO Betuweroute") **Part of JDOI activity:** Immediate action 1, Initiative 2.1	**Project lead:** DB Cargo AG /ProRail	**Starting date:** October 2021 **To be completed by:** Q2 20207

Risk #	Risk description	Mitigation measure	Impact	Probability (%)
R1	Dutch funding has not yet been made available due to the DB internal review of the project.	M1: Clarity from Germany on governance	Reduced Project Scope / Time Delay and increased costs	
R2	Risk of a missing partner for GoA 4 implementation	M1: Market survey for GoA 4 partners taking into account the reference architecture was carried out - ranking list drawn up and partners identified	Reduced Project Scope	
R3	Maintenance on the Betuweroute / Emmerich	M1: Identification of track works and closure of the tracks, cooperation with ProRail and DB InfraGO	Reduced testing opportunities	

Project financing	
Project costs: Financial estimate: 45.6 Mio. EUR (incl. 1.3 Mio. EUR for DLR), 15 Mio EUR (Dutch site) as total project costs from 2021-2027	**Financing by (and how much)** Funding by German ministry (BMDV): Co-funding of max. 17.5 million EUR for DB Cargo AG and approx. 1.3 million EUR for its consortium partner within the project, the "Deutsches Zentrum für Luft- und Raumfahrt" (DLR) Funding by Dutch ministry of colobaration partner ProRail: max 15 million EUR The majority of total project cost will be financed by DB / DB Cargo. Funding by BMDV is secured until 12/2025. Financing by DB is in question.

Summary project status	Status meeting	Status meeting	Status meeting	Status last meeting	Status now	**Explanation**
Project execuction	○	○	○	◔	◑	Contract with ATO Onboard Supplier Thales Transportation was signed (21.11.2022) as well as the contract RSC supplier REMOOT (25.11.2022) Supplier achieved the first three Quality Gates, Partner for GoA4 function has been identified From 2025 onwards, the majority of project development will be on infrastructure and test execution.

JDOI Project-Cluster

Project cluster:	**Part of JDOI Activity:**	**Organizations involved:**	**Reporting for JDOI:**
2. Digitalisation and automation	2.1 Development of rail freight based on technological innovations	Deutsche Bahn AG, DB Cargo, Rail Cargo Austria, SBB Cargo, Ermewa, VTG, GATX	Deutsche Bahn AG: Dr. F. Wartzek

Objectives and General Status

- Testing and Demonstrating the Digital Automatic Coupler for Freight Rail Traffic in Europe
- After selection tests in Phase I and operational testing in Phase II, the project was first time extended until June 2024
- The project has shown its unique role in the discussion in Europe → Second extension by BMDV until June 2026 to continue testing and showing of DAC (Phase V and VI)

Specific Activities within Cluster:

#	*Title*	*Description*	*Contact*	*Main activities*	*Development since last JDOI WG*	*Issues (e.g. Risks / Financial Needs / Links to other projects etc.)*	*Start – End*
1	**AP1 – Phase III**	Extending the testing from Phase II	Deutsche Bahn AG: Dr. Fabian Wartzek fabian.wartzek@deutschebahn.com +49 152 37423917	▪ Review and analysis of the Phase II results ▪ Deriving of specifications based on the results ▪ Special tests for components to deepen the knowledge or validate updates	▪ Phase II results have been analyzed and further tests executed ▪ Special tests like corrosive environments, static and dynamic wagon scales ▪ Tests of new e -coupler concepts ▪ Assessing derailment safety	1. Currently, the development is bundled in ERJU FP5. Hence, the updates need to be defined and agreed there. 2. The suppliers need to deliver the updates on the products to overcome the identified issues 3. Especially for the locomotive there is a risk of not being able to receive a working solution within the DAC4EU project duration	Start 01/2023 End 12/2023
2	**AP2 – Phase IV**	Testing the operational DAC sytem ready for service		▪ Modification of the hardware ▪ Testing of new DAC systems ▪ Preparation for integrating a hybrid coupler into a loco ▪ Testing of a loco with an installed hybrid coupler ▪ Extending the test locations to further european countries, e.g. Netherlands	▪ Visisting Serbia, Hungary and Austria ▪ Operational testing in new locations (e.g. Kornwestheim marschalling yard) ▪ First drives to assess stability of new e-couplers ▪ Testing operation with a rail ferry boat		Start 01/2024 End 06/2024

JDOI Project-Cluster

Project cluster:	**Part of JDOI Activity:**	**Organizations involved:**	**Reporting for JDOI:**
2. Digitalisation and automation	2.1 Development of rail freight based on technological innovations	Deutsche Bahn AG, DB Cargo, Rail Cargo Austria, SBB Cargo, Ermewa, VTG, GATX	Deutsche Bahn AG: Dr. F. Wartzek

Objectives and General Status

- Testing and Demonstrating the Digital Automatic Coupler for Freight Rail Traffic in Europe
- After selection tests in Phase I and operational testing in Phase II, the project was first time extended until June 2024
- The project has shown its unique role in the discussion in Europe → Second extension by BMDV until June 2026 to continue testing and showing of DAC (Phase V and VI)

Specific Activities within Cluster:

#	*Title*	*Description*	*Contact*	*Main activities*	*Development since last JDOI WG*	*Issues (e.g. Risks / Financial Needs / Links to other projects etc.)*	*Start – End*
3	**AP3 – Phase V**	Component Testing and Validation	Deutsche Bahn AG: Dr. Fabian Wartzek fabian.wartzek@deutschebahn.com +49 152 37423917	▪ Review and analysis of the Phase IV results ▪ Modify test configuration to comply with most recent discussions and decisions ▪ Special tests for components to enable integration into the test and proof safe operation		1. Currently, the development is bundled in ERJU FP5. Hence, the updates need to be defined and agreed there. 2. The suppliers need to deliver the updates on the products to overcome the identified issues 3. Especially for the locomotive there is a risk of not being able to receive a working solution within the DAC4EU project duration	Start 06/2024 End 06/2025
4	**AP4– Phase VI**	Operational Testing in Real Environments		▪ Definition of test concept to show possibilities to extend current operational testing ▪ Evaluation of alternative partners to enable commercial testing ▪ Setup representative hardware configurations enabling more independent testing			Start 06/2025 End 06/2026

JDOI-projects

Project name: INDIGO+ **Part of JDOI activity:** 2.1	**Project lead:** TNO (Rik Poulus)	**Starting date:** Q3 2022 **To be completed by:** end 2026

Organizations to be involved:
TNO, BCI, TU-B, ProRail, RTB Cargo, DB Cargo, PoR, EGS, VTG, RSC, Voith and other logistics and industrial partners. Coalition of the willing is currently being expanded.

Project team:
TNO, BCI and ProRail (project management, legal)

Project objectives & deliverables
Research on the potential of automated train preparation process (automatic brake testing, automatic train inspection, digital automatic coupling (DAC). Feasibility phase ready (Deliverable 01 -2024), next step is the functional design and the set -up of a living lab on the corridor Rotterdam – Aachen (via Venlo). Proposal for next step in BO -MIRT of October 2025.

General status

◔ Revival of Indigo project idea with shift to 2 Dutch and 1 German living lab between Rotterdam, Venlo and Stolberg (Aken). Starting with a feasibility phase in Q2 -3 2022

Project phase / tasks	Status now	Status last meeting	Responsible	Deadline	Explanation, next steps/actions
Phase 1 – Feasibility study	●	Feasibility study started	TNO	Q4 2023	Funding granted (MIRT GVC), Final report approved om Q1 2024
Start Phase 2 – Functional Design	○	Proposal for financing in BO-MIRT Q4 2024	TNO	Q4 2024	Based on results phase 1 & depending on funding (investigation in Phase 1). No funding of National Grow Fund (NFG) 3 (NL)
Start Phase 3 - Living Lab	○	Start after approval BO-MIRT financing (Q1 2025)	TNO	Q1 2025	

JDOI-projects

Project name: INDIGO+ **Part of JDOI activity:** 2.1	**Project lead:** TNO (Rik Poulus)	**Starting date:** Q3 2022 **To be completed by:** end 2025

Risk #	Risk description	Mitigation measure	Impact	Probability (%)
1	Funding of next step not yet assured	Finding additional financing partners	No optimization last & first mile in NL and DE	40%

Project financing	
Project costs: Phase 1: Feasibility study: 200 kEuro Phase 2: Functional design and LL preparation: 200 kEuro Phase 3: LL with brake control and wayside train monitoring: 4-6 million Euro	**Financing by (and how much):** Phase 1 and 2 funded by BO-MIRT (Ministry of IenW, province of Zuid-Holland) Phase 3 to be investigated in phase 2, level depends on functional design that is to be elaborated.

Summary projectstatus	Status meeting	Status meeting	Status meeting	Status last meeting	Status now	**explanation**
Project running						Funding granded (MIRT GVC), First concept begin of October 2023

JDOI-projects

Project name:	**Project lead:**	**Starting date:** end 2022
EDICT: Enhanced Data Interoperability for Combined Transport **Part of JDOI activity:** 2.2	Eric Feyen, UIRR	**To be completed by:** February 2025

Organizations involved:
Partners/beneficiaries
UIRR, Port of Rotterdam,KombiVerkehr, RCO/RCA, Duisport, Combinant, CIS, WIENCONT, HUPAC , CIS
Supporters
Contargo, RFC RALP, RFCScanMed, RNE, UIC, European Shippers Council, CLECAT, CEFIC, Covestro,Metrans, Novatrans, Consorzio ZAI, DUSS
Project coordinator: UIRR, Eric Feyen

Project objectives & deliverables:

EDICT is a sequel to the projects ELETA (2017-2019), Digital Train 1.0 (2020-2021), Digital Train 2.0 (2021-2022)

- Activity 1: Implementation of electronic data exchange between terminals and the rail sector
- Activity 2: Development of a common Quality Management System for European Combined Transport (Q-ELETA)
- Activity 3: Initiating data exchange with (new) identifiable and eligible stakeholders (upgrade CESAR)

General status

Digital Train 2.0 completed on 31 Dec 2022; EDICT started on 1 Sept 2022 and is to be completed 28 Febr 2024.
Project is approved by BMIV and MinIenW (and further by MoTs Austria and Belgium). EDICT follows up on BMIV project KV4.0.

Project phase / tasks	Status now	Status last meeting	Responsible	Dead line	Explanation, next steps/actions
ELETA			KNV/UIRR	31 Dec. 2019	
Digital Train 1.0			RNE/UIRR	31 Dec. 2021	
Digital Train 2.0			RNE/UIRR	31 Dec. 2022	
EDICT, activity 1			UIRR	28 February 2025	
EDICT, activity 2			UIRR	28 February 2025	
EDICT, activity 3			UIRR	28 February 2025	

JDOI-projects

Project name: EDICT: Enhanced Data Interoperability for Combined Transport **Part of JDOI activity:** 2.2	**Project lead:** Eric Feyen, UIRR	**Starting date:** end 2022 **To be completed by:** February 2025

Risk #	Risk description	Mitigation measure	Impact	Probability (%)
1	Data exchange with terminals delayed			

Project financing	
Project costs: € 3.1 mln	Financing by (and how much): The EC has approved to fund 50% of project costs

Summary projectstatus	Status meeting	Status meeting	Status meeting	Status last meeting	Status now	**explanation**
Project started 1 Sept 2022						The project has been prolonged by 6 months until 28 February 2025.

JDOI-projects

Project name: ProMI - Process Optimisation through ETA-**M**anagement in **I**ntermodal Transport **Part of JDOI activity:** 2.2 Digit. Interfaces / ETA	**Project lead: Fraunhofer IML**	**Starting date: 09/2021** **End date: 05/2024**

Organizations involved: **Project team:**	**catkin** (Contract Mgt. & Partner network via central web collaboration platform), **Hacon** (ETA Management Platform), **Siemens Mobility** (ETA calculation), **Bentheimer Eisenbahn** (train operator) + connected companies Euroterminal Coevorden (Hinterland Terminal) and Kraftverkehr Emsland (Trucking), **Fraunhofer-Institut für Materialfluss und Logistik IML** (Project mgt., process analyses, academic guidance), **Kombirail** (train operator) **Contacts: catkin** - Christian Krüger, christian.krueger@catkin.de, **Hacon** - Niklas Galonske, niklas.galonske@hacon .de, **IML** – Achim Klukas, Klukas, achim.klukas@iml.fraunhofer.de

General status	
●	Funding granted within German programme "Zukunft Schienengüterverkehr "; due to delays compared to the initial schedule a project extension has been agreed until May 2024; meanwhile the project has been concluded(= finalization status 100%)

Project phase / tasks	Status now	Status last meeting	Responsible	Dead line	Explanation, next steps/actions
Project start	●	●			See above (starting date, general status); start/end shifted due to formal reasons (changes in project consortium).

JDOI-projects

Project name: ProMI - Process Optimisation through ETA-**M**anagement in **I**ntermodal Transport **Part of JDOI activity:** 2.2 Digit. Interfaces / ETA	**Project lead: Fraunhofer IML**	**Starting date: 09/2021** **End date: 05/2024**

Risk #	Risk description	Mitigation measure	Impact	Probability (%)
1	Pilot relation not available any more (stop of transport, commitment)	Additional pilot relation(s)	High	Medium
2	No availability of real-time (train) data	Add. pilot relation(s), clear agreements with data owners (train operators) and data providers (IMs, RNE)	High	Low
3	Limited availability of programmers	Alignment of project schedule with available ressources	Medium	High

Project financing	
Project costs: ~ 1,3 mio Euro	Financing by own resources + Co-funding via German funding programme ("Zukunft Schienengüterverkehr")

Summary project status	Status 07/20	Status 09/20	Status 01/21	Status 05.21	Status 06.22	Status 07.23	Status now	**explanation**
Project application								2nd stage application approved by EBA → grant notice (31.08.2021)
Project start								Project started (1.9.2021)
Project progress								All tasks completed by end May 2024: Requirements analysis + Technical concept + Data interfaces and analyses + Prototype development

JDOI Project-Cluster

Project cluster:	**Part of JDOI Activity:**	**Organizations involved:**	**Reporting for JDOI:**
3.3 Enhanced coordination of cross-border traffic with intensified cooperation between traffic control centers and taking full advantage of border dispatchers at DB InfraGO and ProRail traffic control centres	**Interoperability and harmonisation**	DB InfraGO Duisburg/Hannover/Frankfurt and ProRail VL (Utrecht, Zwolle, Kijfhoek & Eindhoven)	For ProRail: Guus de Mol & Justus Hartkamp

Objectives

- Primary goal of the project is to develop and implement new operational procedures to allow RU's to run trains in a smooth, stable and transparent manner between DB InfraGO and ProRail.
- Secondary goal of the project is to initiate an active cooperation between DB InfraGO and ProRail.

General Status

Over the course of the last year the project has seen a transition to a more 'natural' cooperation initiated and maintained from the operational assignment and the relevant connected development. Within GD2.0 several actions identified within in the project are being pursued to finish the scope of the project. These actions focus on a new (changed) operational process, increased exchange of relevant (operational) information and intensified exchange of knowledge and experience between operational colleagues.
Within the QCO program a stable form of exchange with RUs has been achieved and is being maintained for both RFC1 and RFC8. As a continuous thread through the program there is increased effort to enhance the reports that are being used to measure performance on the border-section of the corridor. For the 80-weeks closure on RFC1 a special QCO is being prepared on a weekly basis to help address specific international issues and to position IMs and RUs to be able to quickly address and solve these issues.

Specific Activities within Cluster:

#	*Title*	*Description*	*Contact*	*Main activities*	*Development since last JDOI WG*	*Issues (e.g. Risks / Financial Needs / Links to other projects etc.)*	*Start – End*
4	**GD2.0**	Development of the cooperation between DB InfraGO and ProRail	ProRail: Martijn Meegdes DB InfraGO Martin Cygon Dirk Staymann	▪ Development of new processes of cooperation	New process ready. Implementation running.	Risk/Dependency: Operations is depending on developments with regard to timetable-harmonisation	Q1-2023 Q4-2024
				▪ Increased knowledge of another ones operations	Exchanges planned. Visits running.		Q1-2023 ongoing
				▪ Increase exchange of (operational) information	Placement of relevant systems planned		Q4-2024

JDOI Project-Cluster

Project cluster: **3.3. Enhanced coordination of cross-border traffic with intensified cooperation between traffic control centers and taking full advantage of border dispatchers at DB InfraGO and ProRail traffic control centres**	**Part of JDOI Activity:** **Interoperability and harmonisation**	**Organizations involved:** DB InfraGO Duisburg/Hannover/Frankfurta nd ProRail VL (Utrecht, Zwolle, Kijfhoek & Eindhoven)	**Reporting for JDOI:** For ProRail: Guus de Mol & Justus Hartkamp

Specific Activities within Cluster:

#	*Title*	*Description*	*Contact*	*Main activities*	*Development since last JDOI WG*	*Issues (e.g. Risks / Financial Needs / Links to other projects etc.)*	*Start – End*
4	**QCO**	Active communication with IMs and RUs about the state of affairs, oncoming developments, performance and challanges around the RFC1 border crossings.	ProRail: Martijn Meegdes DB InfraGO: Martin Cygon	▪ Regular Telco's to dicuss several topics and determine actions.	Regular meetings are stable and are running to a fixed agenda of topics.	Close relation between Participation of RUs and 'power' of the QCO. Increased 'smartness' of reports require high amount of (manual) labor due to different formats in available data.	Q3-2023 ongoing

JDOI Project-Cluster

Project cluster: **ERTMS – European Railway Traffic Management System**	**Part of JDOI Activity:** **Financing and cooperation on national and EU levels**	**Organizations involved:** Digitale Schiene, Programmadirectie ERTMS, DE and NL ministries	**Starting Date: March 2022**

Objectives and General Status

- Aligning on relevant topics to the ERTMS rollout on a ministerial as well as program level. Currently 3 working groups are working together to:

1. Align their approaches and learn from each other's experiences
2. Explore were both countries can join forces and bring best practices to EU level

Specific Activities within Cluster:

#	*Title*	*Description*	*Contact*	*Main activities*	*Issues (e.g. Risks / Financial Needs / Links to other projects etc.)*	*Start – End*
1	**Operational Processes & Shunting**	Exploring the opportunies to further harmonize the operational processes between the Netherlands and Germany.		**Focus topics for harmonisation:** – Coordination of TSI OPE input in European working groups (ongoing) – Operational process design including Supervised shunting (ongoing) – Operational rules: When will the operational rules products available for analysis of differences? – (Outside of working group: Operational instructions, Operational testing) **Proposed results** • Updated analysis of the differences between both networks, to be produced Q3 2024 • Joint recommendation of topics suitable for harmonisation between both networks, to be produced Q3 2024 • Concrete proposals for harmonisation drafted • Actual changes to further harmonise the processes of both networks decided		

JDOI Project-Cluster

Project cluster: **ERTMS – European Railway Traffic Management System**				**Part of JDOI Activity:** **Financing and cooperation on national and EU levels**	**Organizations involved:** Digitale Schiene, Programmadirectie ERTMS, DE and NL ministries	**Starting date: March 2022**
2	**Vehicle Migration**	Exploring how the two countries can join forces in the migration of freight and yellow fleet vehicles. .		• Expand the working group to other European countries • Address key points in European context – To see if and when infrastructure migration steps to ERTMS L2 only is possible, while continuing the current international services – To get insight in migration possibilities on corridor level – To prevent double funding of vehicles through European and national funding schemes – To monitor progress of the migration of the international fleet – To get synergy of first in class activities, share knowledge – To support European and national decision making processes with actual and factual information **Proposed results** • Monitor the (upcoming) availability of compatible (inter -)national vehicles to be used for international, national, regional and local areas of use. • Make sure that prototypes of international and national rolling stock are known to European parties, so efficient prototyping can be done. • Arrange adequate EU co -funding for international rolling stock on a European level – not only on a national level.		

Bijlage 2 – Minutes Signatories' meeting

German-Dutch Joint Declaration of Intent on Rail Freight

Signatories' meeting minutes 21 October 2024

Present
Chris Jansen, IenW
Gero Hocker, BMDV
Wino Aarnink, IenW
Hinne Groot, IenW
Marcel Tijs, IenW
Jurgen van Heemst, IenW
Sarah Kolen, IenW
Susanne Uilenbroek, IenW
Jörg Stephan, BMDV
Florian Koll, BMDV
Onno de Jong, Port of Rotterdam
Guus de Mol, ProRail
Jan Egbertsen, Port of Amsterdam
Markus Hecht, TU Berlin
Lucie Petersen, VDV
Rob Bagchus, VRTO
Maurits van Schuylenburg, Port of Rotterdam
Pierre Timmermans, DB
Jelle Rebbers, DB Cargo NL
Christoph Pein, BMDV
Nanouke van 't Riet, DB Cargo NL
Hotske Zijlstra, ProRail
Dennis Veld, ProRail
Henk Samson, Strukton
Baselyos Jacob, DB
Norbert Kahl, DB
John Voppen, ProRail
Roy Germain, DB
Fabian Wartzek, DB
Claus Cremer, DB
Paul van de Lande, TNO
Rita Hagos, DB
Geert van Eijk, Evofenedex
Justus Hartkamp, ProRail
Adriaan Roest Crollius, Panteia
Chris Wensink, Panteia

Online:
Christoph Lerche, DB

Opening remarks Dutch state secretary Mr Jansen
A warm welcome to our German colleagues and other participants. As you are aware, there have been some changes since last year, with a new government taking office in the Netherlands. Today we mark the fifth anniversary of the JDOI, with important innovation technologies on the agenda. Our ambitions are clear: modal shift is necessary in the EU. However, rail freight's challenges put pressure on its competitiveness. The Netherlands and Germany are more than just neighbors. The Netherlands will present its new rail freight strategy next year, working together with our German partners. Temporary restrictions as a result of works on the 'Boog bij Meteren' and third track Betuweroute need to be

overcome. For ATO, our commitment was already arranged. We are convinced that the JDOI with Germany is key and that we will overcome the challenges.

Opening remarks German state secretary Mr Hocker
We are delighted to be present in Amersfoort and also with the good preparation of today's meeting. Indeed there are changes in the composition, but what hasn't changed is the close cooperation between the Netherlands and Germany on rail freight transport, a key field for the future, both in the public and private sectors. In times of global turbulence, rail freight transport remains a stabilizing factor in Europe. It is the backbone of European goods transport and a reliable constant. However, the rail freight sector faces major challenges. If we want it to become more competitive, we need to make substantial investments in its infrastructure. In addition, it is vital that we clear the huge innovation backlog. In order to keep pace with the rapid developments of the 21st century, rail freight transport must become more digital and automated. An example is DAC, which also requires action at EU level. Another example is ATO. The foundation for our successful cooperation is there, let's continue the work.

Signatories statements
John Voppen, ProRail: ATO is highly important, therefore we are pleased with the continued funding. In this project we work closely with DB Cargo and DB InfraGO, which can serve as an example. Future benefits of ATO are also relevant for the proposal for a Regulation on capacity. We need support from the governments and sector to take the next step. In addition, we need to align our strategies, between both countries. Finally, we need to move toward realistic TEN-T criteria, in other words, one standard.

Pierre Timmermans, DB Cargo: Rail freight is a team sport. Projects that are good for both countries need to be advanced further. A functioning network for single wagon transport is key. We need to harmonize efforts toward this goal. In addition, we need a shared strategy for implementation of innovations, especially DAC.

Geert van Eijk, Evofenedex: We as shippers need all modes, emphatically including rail. Sustainability is key: rail is the most sustainable mode. For the Netherlands, 90% of freight trains are to/from Germany. Therefore, bilateral cooperation is key. But currently, rail is not always the most competitive option. That should change.

Nanouke van 't Riet, DB Cargo NL: The market is currently not positive, but rail is still essential for the EU. This also goes for military mobility. Cooperation therefore is key, and we strongly support the JDOI.

Lucie Petersen, VDV: It is important to pursue modal shift more intensely. Infrastructure and innovation therefore both require investment. At the same time, we should ensure that legislation regarding weights and dimensions should not put rail at a disadvantage.

Maurits van Schuylenburg, Port of Rotterdam: German-Dutch cooperation is very important. In the Netherlands, 75% of freight trains are to/from Rotterdam. Moreover, rail freight is essential for resilience of hinterland transport. Innovations such as ATO, DAC, and digitalization in general are vital for improving rail freight's competitiveness. But also infrastructure investments are still needed. Standardized resilience and digitalization are essential, which can only be achieved through cooperation.

Jan Egbertsen, Port of Amsterdam: Capacity use is a challenge, but shift to rail is necessary. To achieve it we must include all parties, including NSAs. They are required to make innovation work.

Rob Bagchus, VRTO: Efficient infrastructure and high service levels are required for rail freight to be competitive. Cooperation between the Netherlands and Germany is therefore necessary, which we fully support.

Henk Samson, Strukton: There is JDOI progress obviously, which is good to see. But we also should look further at the consequences of implementation of solutions, e.g. in terms of service levels and use of the network. Only in that way can we make the most of the necessary innovations.

Paul van de Lande, TNO: The need for innovation is there, as reverse modal shift is a threat. The infrastructure capacities are limited. Mutually supported innovation projects are needed to address this challenge.

DAC
Fabian Wartzek, DB; Klaus Cremer, DB (see Powerpoint).

There are different DAC initiatives going on. We focus on the solution, but also on its place in the system. DAC needs a European delivery program so that migration takes place everywhere. But the solution needs to be highly reliable before it can be implemented.

Visibility of the project and the solution and discussions with the NSAs are also part of the project. This also includes taking the solution to the EU level (Commission and Europe's Rail).

DAC delivery is now eligible for a CEF call, so there is a possibility to acquire financing not only for studies, but also for implementation. There is however strong competition, such as ETCS, SESAR. A consortium is being set up at the moment, led by UIC.

ATO
Hotske Zijlstra, ProRail; Norbert Kahl, DB (see Powerpoint).

Rail is challenged by capacity, labor shortages and energy costs. The advantages of ATO are obvious.

Key to success is cooperation between DB and ProRail. The progress is steady, quite some work has been done on both sides. End of 2024 the preparations for the one-year test phase will be completed.

Innovation is hard, especially in rail (stakeholders, technical specifications, the public). The project is planned to be transferred from DB Cargo to DB AG. When this is done, the 15 million € of funds from the Dutch side can hopefully be put to use.

ATO will increase network usage. The ETCS level-2 freight line of the Betuweroute and the most modern multilocos enable the best test conditions.

The specifications now have to be tested. Europe's Rail does not fund it, so it is made possible only by both governments. We are now ready for the next steps. The team is highly motivated, the financing especially from German (DB) side is now key.

Feedback discussion Arbeitsgruppe
Marcel Tijs, IenW (see Powerpoint)

The JDOI cooperation is generally appreciated, but it is found the cooperation could get more concrete.

Additional or reopened topics could be e.g. ERTMS roll out, 740m trains, authorizations, capacity allocation, subsidy schemes on both sides of the border, alignment of infrastructure strategies.

It is proposed to organize one or two intermediate meetings, before the next annual meeting, to further define additional topics.

Q&A:

Q: Rail is an environmentally friendly mode, but noise is an issue. It was partly addressed by braking blocks retrofitting, but not entirely. Further noise reduction (TSI Noise) is needed, and should be included upfront in the projects/topics.
A: We will include the topic in the list for possible additional topics.

Concluding remarks
German state secretary Mr Hocker: Many thanks to all for the discussion and presentations. We will continue the collective work. Rail freight must be made a constant priority. Our cooperation is multifaceted, I would like to thank everyone involved. Thank you Mr Jansen, we will do our best to return the favor of organizing the meeting next year.

Dutch state secretary Mr Jansen: Thank you Mr Hocker for your kind words. The JDOI is showing progress, but more must be done. Innovation plays crucial role. We will also have further in-depth discussions on infrastructure investments: we propose to have this exchange yearly. We look forward to new proposals to be developed, and to move the agenda forward.

Bijlage 3 – Minutes Arbeitsgruppe

German-Dutch Joint Declaration of Intent on Rail Freight

Arbeitsgruppe meeting minutes 21 October 2024

Present
Florian Koll, BMDV
Jörg Stephan, BMDV
Marcel Tijs, IenW
Hinne Groot, IenW
Jurgen van Heemst, IenW
Sarah Kolen, IenW
Jan Egbertsen, Port of Amsterdam
Markus Hecht, TU Berlin
Wim van der Tweel, DB Cargo NL
Henk Samson, Strukton
Maurits van Schuylenburg, Port of Rotterdam
Justus Hartkamp, ProRail
Guus de Mol, ProRail
Dennis Veld, ProRail
Lucie Petersen, VDV
Baselyos Jacob, DB
Norbert Kahl, DB
Roy Germain, DB
Fabian Wartzek, DB
Claus Cremer, DB
Paul van de Lande, TNO
Jelle Rebbers, DB Cargo NL
Adriaan Roest Crollius, Panteia
Chris Wensink, Panteia
Henk van Oostveen, Railcenter
Rita Hagos, DB
Online:
Niklas Galonske, Hacon
Gerhard Oswald, Go Multimodal

Opening remarks
IenW: A warm welcome to all present today in Amersfoort as well as online. We have important topics to be discussed. Later today, a bilateral meeting will be held between both state secretaries. Today is also a special day as we celebrate the JDOI's fifth anniversary. We look forward to our discussions.

BMDV: Also on behalf of BMDV a warm welcome to all, and thanks for the Dutch side for hosting today's meeting. We are happy to celebrate the fifth anniversary, the JDOI is a good example of cooperation between our two governments but also of cooperation with the sector. There are a lot of topics today that coincide, including in the field of digitalization. We look forward to the discussions today.

Welcome and key innovations Railcenter
Henk van Oostveen, Railcenter (see Powerpoint with introduction video).

On behalf of Railcenter a warm welcome to all participants. Details of Railcenter's activities are found in the accompanying presentation with film.

Q&A:

Q: How does Railcenter make sure to not make either profit or debt?
A: Both are avoided through management of the prices offered to the customers.

ATO Betuweroute
Baseliyos Jacob, DB; Roy Germain (ProRail) (See Powerpoint).

ATO is not only a technology in itself. It is important to address future labor shortages and to enable more flexible operations. Also energy consumption, punctuality and reliability will add to the rail system's productivity.

Two freight locomotives have been equipped for the pilot, and the track side system is equipped with remote operation capability and supervision. The testing period will then take one year. This also includes timetable optimization in case of delays, etc.
ATO requires intricate cooperation between operations, engineering and safety staff. The project therefore delivers a multidisciplinary approach that prepares for the implementation of the new technology.

The remote/automated control replaces the "vehicle feeling" of the driver. The characteristics of the vehicle (freight, regional, etc.) must therefore be included in the controls, so the characteristics need to be determined by the system through testing. The pilot will create the maximum allowed stresses on the train so that the characteristics are shown.

Q&A:

Q: Are the unions accepting of the solution?
A: The unions are accepting, as the key motivation is addressing demographic changes / labor shortages.
Q: What are the key industry partners?
A: Key industry partners are OTIF, Hitachi, and Europe's Rail. Europe's Rail however has limited interest momentarily in freight demonstrators, still the ATO project is highly relevant for them.
Q: Is it expected that ATO will lead to better capacity on the network? Especially on congested parts?
A: Our hope is to increase capacity by up to 15%, although system parameters influence the actual increase. The trials need to provide better experience with it.
Q: What would be the target date in an ideal world for the rollout of ATO on the rail system?
A: The project will be finalized in 2026, then the commercial phase and TSI approval need 2 years, then 2.500 locomotives need to be equipped which would take 5 years. However, such horizon does not seem realistic. Governments will have an important role to play, also regarding public acceptance and financing.

Indigo+
Paul van de Lande, TNO (see Powerpoint)

Indigo+ is a feasibility study, with a focus on the potential of automated train preparation process (automatic brake testing), automatic train inspection, and digital automatic coupling (DAC). As we all know, manual and outdated processes in the rail sector hamper modal shift. Where there are innovations, a holistic approach is lacking. Therefore, Indigo+ takes the three technologies together.

Wayside monitoring is already applied by Railwatch, but the Netherlands is largely left out of this. ProRail and NS have parallel systems in testing, but not for freight. Therefore, the Netherlands should be better aligned.

Challenges also include legal aspects, i.e. the admission of innovations on the network.

Regarding DAC, the technology is important for the EU system as a whole. However, the Netherlands has mostly shuttle trains (rather than single wagons) with fewer coupling operations. Therefore, the business case seems unclear.

For wayside monitoring, it is a promising technology, a living lab in the Netherlands could be started in order to gain experience. The same goes for automatic brake control, which could be tested e.g. on the Rotterdam-Aachen corridor. Terminal operators in Rotterdam, Venlo and Aachen are being involved.

In the Netherlands a stronger industry ecosystem (such as in Germany) is somewhat lacking, therefore cooperation is required, such as with the German partners. The living lab is now being designed, then together with additional industry partners and the ministry it can be started, if financing is available.

Q&A:

Q: Where to start with innovating the system?
A: This is the major question for Indigo+, you need to establish how different innovations interrelate. Then, financing must be secured and stable, which often again depends on the actual feasibility of the solutions.
A: E.g. Norway tried to implement ETCS all in one go, it failed and now there is a chaotic situation. This shows you need a very realistic implementation plan upfront, otherwise you cannot do it.
A: Implementation of new technologies on isolated tracks / traffic is however an intermediate option, at least for testing. But there should be a strategy behind that for larger-scale implementation.
Q: For wayside and vehicle diagnosis, the risk analysis shows that the innovation leads to a much better situation, however, this does not translate into acceptance. The question is why not?
A: It is important to include the NSAs into discussions about acceptance and authorization, it is not so much the IMs.
Q: Is there a Dutch case for DAC? We should all look at a European scale. Testing is being done by Europe's Rail, these results should be shared and discussed.
A: Indeed, the Dutch side should be better aligned.
A: We need to look at the system, not so much at who earns what and where. Interoperability of innovations is key.
Finally, BMDV remarked it is pleased with the recommendation for further involvement of the Dutch side in DAC.

<u>Results of survey, exploration of future JDOI actions</u>
Adriaan Roest Crollius, Panteia (see Powerpoint).

Next to advising both ministries and organizing this event, Panteia was asked to also examine how stakeholders envisage to proceed with JDOI topics. Generally, the JDOI is well perceived, but some improvements are welcome. Especially, results from the Arbeitsgruppe should be better used in the Signatories meeting.

Possible additional topics for the JDOI include:

- On DAC: next to the state of play, next steps toward implementation could be discussed. Some ideas for further discussion include:
    - Possibility of a German-Dutch (ministerial) declaration on DAC?
    - German-Dutch working group on DAC pilot trains?
    - Another topic that could be integrated in the JDOI is the general overhaul of the German railway network ("Generalsanierung"):
    - Report on the general overhaul with particular reference to the Riedbahn (first "high-performance corridor" to be refurbished as of mid of July 2024)

    - Reference to the latest status of preparations for Emmerich-Oberhausen.
    - What can we learn from the new approach of DB InfraGo?
- Common network resilience management (previously cooperation group third track)
    - In case of new large-scale *Planfeststellungen*
- 740m trains on cross-border routes
    - Topic could be reactivated for an update of the current status / comparison between relevant plans in both countries
- Harmonization of network access conditions and priority rules, including track access charges and framework conditions for terminals.
    - No activities were defined yet
- Enhancing interoperability by harmonization of operational regulations and administrative procedures. E.g. cross-border authorization of rolling stock, use of languages in cross-border operations, cross-acceptance of professional qualifications such as wagon inspector and shunter, which are not yet harmonized at EU level
    - Next to harmonization of braking calculations (finalized), no further activities were defined yet.
- Common analysis of transfer of benefits / compensation models (market failure due to divergence of costs and benefits).
    - No activities defined yet. Both ministries could exchange ideas on a common approach on subsidy programs (BMDV evaluated the German user fee system).

Q&A:

Q: The DAC demo train was brought to Amersfoort, the authorization by the NSA proved difficult to obtain. Perhaps the JDOI platform should be enriched with the legislative/cross-border acceptance colleagues. Such relatively small hurdles should also be in the scope of JDOI. It is also the attitude, e.g. for small changes to automated braking, all NSAs need to agree first. This is not realistic.
A: The NSAs can be involved if needed, but authorization of the solutions should also be integrated in the projects.
A: DG MOVE explained that homologation plays a major role for ERA, but national authorities should work with ERA to remove national requirements. Therefore, perhaps ERA should be involved if we want to involve NSAs.
A: We could feed input into ERA and Europe's Rail (e.g. for authorization of DAC and/or ATO) and see what is not covered there. If topics cannot be addressed there, we can include them in JDOI.
It is proposed that an intermediate meeting is held before next year's annual meeting, in order to discuss topics relevant for JDOI.
Finally, it is remarked that it is important to maintain a clear focus within the JDOI. If topics are addressed elsewhere already, we should not focus on them.

Introduction DAC demo train
Fabian Wartzek, Klaus Cremer, DB (see Powerpoint).

The DAC4EU project aims to establish what works and what doesn't. This is done by gaining the operational experience by testing. Tests are showing that DAC has added value even where not expected. Commercial testing on wagon and train level will further add to the EU wide picture.

DAC should be seen as more than a coupler, but rather as an enabler for improving the railway system.

Also, what is needed for the locos is a hybrid coupler as retrofitting of wagons will take time.

There is a CEF call for DAC pioneer trains. A consortium is now being formed, led by UIC. However, additional MS funding will almost certainly be required.

Concluding remarks

The morning session was highly appreciated, the feedback from it will also be handed over to the state secretaries this afternoon. The JDOI shows it is possible to support and accelerate innovations between our two countries.

Bijlage 4 – Eventuele nieuwe initiatieven

Joint Declaration of Intent (JDOI) German-Dutch cooperation on cross-border rail freight

Introduction

- In 2019, Germany and the Netherlands signed a joint covenant, known as the Joint Declaration of Intent (JDOI), agreeing to cooperate closely in the field of rail freight transport. Over the past five years, the German-Dutch cooperation has been further shaped.

- The JDOI focusses on a shared project agenda, with implementation of a number of projects already finalized.

Results brief evaluation survey (I)

- In general, the cooperation between the partners, process and preparation of the meetings are well appreciated
- It is found that the Arbeitsgruppe meetings could be used to reach (more) concrete results that can then be put forward in the high-level meeting
- An additional field of interest for the JDOI could be harmonization / standardization at the European level

Results brief evaluation survey (II)

- On DAC: next to the state of play, next steps toward implementation could be discussed. Some ideas for further discussion include:
  - Possibility of a German-Dutch (ministerial) declaration on DAC?
  - German-Dutch working group on DAC pilot trains?
- Another topic that could be integrated in the JDOI is the general overhaul of the German railway network ("Generalsanierung"):
  - Report on the general overhaul with particular reference to the Riedbahn (first "high-performance corridor" to be refurbished as of mid of July 2024)
  - Reference to the latest status of preparations for Emmerich.
  - What can we learn from the new approach of DB InfraGo?

Other possible new / reopened topics (I)

- Common network resilience management (previously cooperation group third track)
  - In case of new large-scale *Planfeststellungen*

- 740m trains on cross-border routes
  - Topic could be reactivated for an update of the current status / comparison between relevant plans in both countries

- Harmonization of network access conditions and priority rules, including track access charges and framework conditions for terminals.
  - No activities were defined yet

Other possible new / reopened topics (II)

- Enhancing interoperability by harmonization of operational regulations and administrative procedures. E.g. cross-border authorization of rolling stock, use of languages in cross-border operations, cross-acceptance of professional qualifications such as wagon inspector and shunter, which are not yet harmonised at EU level
  - Next to harmonization of braking calculations (finalized), no further activities were defined yet.

- Common analysis of transfer of benefits / compensation models (market failure due to divergence of costs and benefits).
  - No activities defined yet. Both ministries could exchange ideas on a common approach on subsidy programs (BMDV evaluated the German user fee system).