



## Deliverable D 7.1 DAC Migration Roadmap Review II

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## Table of Contents

1.	Executive Summary.....	1
2.	Abbreviations and acronyms .....	2
3.	Background.....	3
4.	Objective/Aim .....	6
5.	WP7 achievements (Months 13-24).....	8
5.1.	DAC migration roadmap and risk management .....	8
5.1.1.	EDDP / DAC migration roadmap Work Area C .....	9
5.1.2.	EDDP / DAC migration roadmap Work Area D.....	15
5.1.3.	Risk management.....	17
5.2.	Regular consolidation of migration assumptions for EDDP boards .....	21
5.3.	Criteria/options for overall migration scenario optimisation.....	22
5.4.	Cross-checks FP5 FDFTO / migration roadmap actions.....	25
6.	Conclusions.....	27
7.	References.....	28
8.	Appendices.....	29

## List of Figures

<i>Figure 1. EDDP and EDDP management within all DAC-related work areas</i> .....	4
<i>Figure 2. DAC migration roadmap management (WP7) within the DACcord project plan</i> .....	5
<i>Figure 3. DACFIT work plan</i> .....	9
<i>Figure 4. EDDP Work Area C activities</i> .....	11
<i>Figure 5. EDDP Activity C1 planning and monitoring status</i> .....	11
<i>Figure 6. EDDP Activity C2 planning and monitoring status</i> .....	12
<i>Figure 7. EDDP Activity C3 planning and monitoring status (1/2)</i> .....	12
<i>Figure 8. EDDP Activity C3 planning and monitoring status (2/2)</i> .....	13
<i>Figure 9. EDDP Activity C4 planning</i> .....	13
<i>Figure 10. EDDP Activity C5 planning</i> .....	14
<i>Figure 11. EDDP Work Area D overview</i> .....	15
<i>Figure 12. EDDP Activity D1 (draft) planning</i> .....	15
<i>Figure 13. EDDP Activity D2 planning (1/2)</i> .....	16
<i>Figure 14. EDDP Activity D2 planning (2/2)</i> .....	16
<i>Figure 15a. All DAC-related activities risk log (extract with some DAC Migration Roadmap risks)</i> .....	18
<i>Figure 16b. All DAC-related activities risk log (<b>extract</b> with some DAC Migration Roadmap risks)</i> .....	19
<i>Figure 17. DAC FDFTO top risks map with impact point in time and mitigation measures</i> .....	20
<i>Figure 18. Outcome of EDDP Work Area C workshop on “reduction of the migration solution space”</i> .....	22
<i>Figure 19. Criteria for overall DAC migration optimisation</i> .....	23
<i>Figure 20. Overarching requirements management for DAC technology</i> .....	26
<i>Figure 21. Examples for input from EDDP migration to FP5</i> .....	26
<i>Figure 22. EDDP Programme Board agenda 25/04/2024</i> .....	29
<i>Figure 23. EDDP Programme Board agenda 26/06/2024</i> .....	29
<i>Figure 24. EDDP Programme Board agenda 17/09/2024 (on-site in Vienna/ÖBB Headquarters)</i> .....	30
<i>Figure 25. EDDP Programme Board agenda 26/11/2024</i> .....	30
<i>Figure 26. EDDP Programme Board agenda 11/03/2025</i> .....	31
<i>Figure 27. EDDP Supervisory Board agenda 03/07/2024</i> .....	32
<i>Figure 28. EDDP Supervisory Board agenda 14/10/2024</i> .....	32
<i>Figure 29. EDDP Supervisory Board agenda 03/12/2024</i> .....	33
<i>Figure 30. EDDP Supervisory Board agenda 21/03/2025</i> .....	33



## List of Tables

<i>Table 1 DAC migration roadmap activities covered by this review</i> .....	6
<i>Table 2 Work package 7 tasks (cf. Grant Agreement):</i> .....	7

## 1. Executive Summary

This summary describes the activities in the DACcord WP7 and the performed work on the **DAC migration roadmap** from project month M13 until M24.

The tasks to be carried out on the DAC migration roadmap under this programme / DACcord project could be driven and developed further compared to plan in support to the EU-Rail JU and in cooperation with all parties involved in the different EDDP work areas and their interfaces, including the European Commission and the European Union Agency for Railways, leading to the current status of the detailed planning of the EDDP's work areas with their respective workstreams and deliverables.

A big step forward was the long awaited start of the EU-Rail project "DACFIT" in the Work Area C, which finally provides the required resources and activities for the Migration Roadmap activities fleet analysis, workshop capacities and basics of migration modelling. The setting for Activity C.4 (infrastructure & IT adaptations) could finally be decided together with Rail Infrastructure Managers on CEO level and can now take up work.

The work on funding and financing (Work Area D) had to concentrate on producing input for CBA updates, as the workstream on identification of funding and financing opportunities did not yet lead to a solution to safeguard the budget for DAC full deployment. No further updates to the CBA were made yet due to immaturity of underlying data (e. g. DAC costs).

The main achievements in the overall DAC migration roadmap management in Reporting Period 2 were

- › Integrating of new upcoming projects (DACFIT) into the EDDP DAC migration roadmap logic, following-it up and link it to the overall programme risk management
- › Integrating the activities from the Migration Roadmap into the regular overall and overarching FP5/EDDP/SPT4 risk management
- › regular reporting on evolutions and findings in all EDDP boards including the stipulation of decision-making where required
- › overall management of the DAC migration roadmap and overseeing its execution

The objective of the WP7 has been fully achieved and all tasks have been successfully performed.

This work will be continued in the DACcord WP8 in the project months M25 to M36 and be summarised in the DACcord deliverable D8.1.

## 2. Abbreviations and acronyms

Abbreviation / Acronym	Description
CBA	Cost-Benefit Analysis
CER	Community of European Railway and Infrastructure Companies
CSEE	Central and South-Eastern Europe (countries)
CTO	Chief Technology Officer (of a company)
DAC	Digital Automatic Coupler
EDDP	European Digital Automatic Coupler (DAC) Delivery Programme
EIM	European Rail Infrastructure Managers
ERA	European Union Agency for Railways/ European Railway Agency
EU-Rail (JU)	Europe's Rail (Joint Undertaking)
FDFTO	Full Digital Freight Train Operations
FP	(EU-Rail) Flagship Project
GMP	General (DAC) Master Plan
IM	Infrastructure Manager
NCP	National Contact Point (in ministry)
PM	Programme Management
PMO	Programme Management Office
RU	Railway Undertaking
SH	Stakeholder
SM	Stakeholder Management
TSI	Technical Specification for Interoperability
UIC	Union Internationale des Chemins de Fer
WA	(EDDP) Work Area
WP	Work package

### 3. Background

The project DACcord provides management competencies to support the EU-Rail JU for the continuation of the professional management of the activities of the European DAC Delivery Programme (EDDP), enabled by the EU-Rail JU and established in the EU-Rail JU work programme, in which European Rail Freight Sector and manufacturers are united to strive for the Europe-wide introduction of a Digital Automatic Coupler.

The present document constitutes the **Deliverable “D 7.1 DAC migration roadmap review II”** of the DACcord project’s **WP 7 “DAC migration roadmap II”** in the framework of the European DAC Delivery Programme within Flagship Area 5 as described in the EU-RAIL MAWP and contributes as well to / interacts with the Flagship Project 5 TRANS4M-R (see Figure 1).

DACcord beneficiary **railiable** was in charge of this work package, in close cooperation with members of the below depicted EDDP work areas especially C and D and all other EDDP members.

DACcord beneficiary **UIC** has performed quality and plausibility checks on the report produced.

For easier referencing, the identification of the areas and activities of the overall DAC programme has been set to the following nomenclature:

Work area	Activity	Title/content
A	A1	EU-Rail Flagship Project 5 TRANS4M-R, “Full Digital Freight Train Operations”
	A2, 3	FP5 FDFTO “Sounding Boards” for FP5 Technology and Operational Rules
B (EDDP & Stakeholder management)	B1	EDDP programme / risk management
	B2	EDDP Stakeholder management
C (Migration)	C1	Fleet analysis and retrofit engineering
<i>(scope of this deliverable)</i>	C2	Retrofit Capacity (workshops, workforce, components)
	C3	Migration strategies & retrofitting plan (incl. traffic analysis etc.)
	C4	Infrastructural and IT adaptations
	C5	Placing into service plan/measures (for operations/staff)
D (Economics)	D1	Funding & financing plan (for DAC pre- and full deployment)
<i>(scope of this deliverable)</i>	D2	Cost-Benefit Analysis (CBA) incl. updates
	D3	Investment plan & procurement framework plan
	D4	Other regulatory & legal framework plans (e. g. GCU)
E (EC and ERA-related)	E1	Efficient & suitable authorisation process/requirements; preparing draft TSIs
	E2	TSI revisions
F (EU-Rail System Pillar)	F	Standardisation of Technical and Operational Rules, preparing inputs to TSI drafting, driving EU standardisation
G	-	the (planned) pre-deployment (Pioneer) Trains project





## 4. Objective/Aim

The main objective of DACcord WP7 is/was **to define and, where resources can be made available, manage the DAC migration roadmap (actions) towards deployment in the months 13-24 of the project** (cf. Grant Agreement).

The execution of the actions of the roadmap is not an objective of this WP.

For doing this, railiable worked closely with the EDDP members and the wider rail freight sector via the EDDP/FP sounding boards and in close cooperation with WPs 9-10 (stakeholder management), specifically refining, optimising and interfacing with FP5, SP and others the existing actions of the DAC migration roadmap in EDDP.

*Table 1 DAC migration roadmap activities covered by this review*

<b>DAC migration roadmap activities at the day of proposal submission</b>	<b>Reference after ID allocation</b>	<b>Scope of this review</b>
<ul style="list-style-type: none"> <li>Fleet analysis &amp; engineering (retrofit readiness)</li> </ul>	C1	<b>In</b> (via DACFIT project)
<ul style="list-style-type: none"> <li>Retrofitting capacity plan:</li> </ul>	C2	<b>In</b> (via DACFIT project)
<ul style="list-style-type: none"> <li>Retrofitting plan (Traffic &amp; customer sidings analysis, operational plan)</li> </ul>	C3	<b>In</b> (via DACFIT project)
<ul style="list-style-type: none"> <li>Infrastructural and IT adaptations:</li> </ul>	C4	<b>In</b> (planning started)
<ul style="list-style-type: none"> <li>Placing into service plan</li> </ul>	C5	<b>Not in</b> (planning too early)
<ul style="list-style-type: none"> <li>Funding/ Financing plan (see WP 11)</li> </ul>	D1	<b>Done</b>
<ul style="list-style-type: none"> <li>CBA (updates)</li> </ul>	D2	<b>In</b> (no progress to WP6)
<ul style="list-style-type: none"> <li>Investment plan &amp; procurement framework plan</li> </ul>	D3	<b>Not in</b> (planning too early)
<ul style="list-style-type: none"> <li>Other regulatory framework plans</li> </ul>	D4	<b>Not in</b> (planning too early)
<ul style="list-style-type: none"> <li>Suitable authorisation process (ERA)</li> </ul>	E1	<b>Not in</b> (work reported in FP 5)
<ul style="list-style-type: none"> <li>TSI revision (EC)</li> </ul>	E2	<b>Not in</b> (planning too early)

Table 2 Work package 7 tasks (cf. Grant Agreement):

To achieve the EDDP and its interfaces management objectives set out in the overall WP objective, the WP carried out:	Status	Chapter
<p>refining the EDDP DAC migration roadmap (concept) / industrial migration plan towards deployment and the required topics/implementing actions – which are not part of this call</p> <p>managing the DAC migration roadmap risk management plan incl. board reporting</p>	Achieved	5.1
<p>Consolidating regularly the existing basic migration assumptions, findings, reports principles/boundary conditions (instruments, methods, tools, e g target scenario, tech packages, retrofit plan, legal and financing instruments, major criteria/ options for overall migration scenario optimisation, ...) for EDDP boards</p>	Achieved within the given limits	5.2
<p>Applying, where appropriate, the criteria/options for overall migration/deployment optimisation</p>	Achieved	5.3
<p>managing/overseeing the execution of these actions, where resources available</p>	Achieved	--
<p>Organising regular cross-checks between FP5 FDFTO and the different migration roadmap actions</p>	Achieved within the given limits	5.4

## 5. WP7 achievements (Months 13-24)

### 5.1. DAC migration roadmap and risk management

The DACcord task consisted in the (cf. Grant Agreement)

- *“Setting-up an EDDP DAC migration roadmap (concept) / industrial migration plan towards deployment by identifying the required topics/implementing actions including milestones, key deliverables, required interactions/interfaces & iterations and related resource availabilities/needs; objective-setting of the actions*
- *Allocating the actions to European, national or company/stakeholder level (e. g. assessment of the retrofit demands per country, per wagon-type and fleets; analysis of all major customer sidings/terminals per country with respect to mixed-coupler fleet operations etc.)*
- *Setting-up, managing of a DAC migration roadmap risk management plan incl. board reporting”*

The predominant EDDP work areas for the **DAC migration roadmap** were/are the **EDDP work areas C and D**.

The migration roadmap will also be touched by work area E (authorisation processes) as soon as first results will be available (today covered in FP 5 TRANS4M-R and ERA Topical Working Group Freight. The results will come together first in the Pioneer DAC Trains). A respective regular exchange EDDP/FP5 on this subject will need to be installed immediately after the beginning of Reporting Period 3, respective after the start of a potential Pioneer DAC Trains project. The way how such a project could be integrated into the EU-Rail JU environment will still need to be worked out.

The different parts of the DAC Migration roadmap have been integrated in the overall FP5/EDDP/FP5 risk management exercise, see chapter 5.4.

The below subchapters describe the follow-up and situation in the different Work Areas and how the transfer into the overall risk management was implemented.



**It has to be seen in Reporting Period 3 in how far this situation finally blocks considerably the fleet technical state analysis and therefore migration planning on programme level, and if and how this needs to be escalated further through the EU-Rail JU and the EDDP boards.**

This (potential) escalation path is the only mitigating measure the EDDP / the DACcord project can apply for the moment; such escalation would furthermore potentially also involve the European Commission and sector actors (preferably EDDP board members and especially those who are OEM's customers).

The main reason quoted on loco OEM side for not being able to provide data is the "lack of a business case", which means that OEM engineering hours spent on vehicle data analysis would need to be paid. This is budget-wise not possible, neither from of the DACcord project nor from the DACFIT project. If this position would persist despite all escalation, or if no budget solution could be found (which is very likely), the risk that no original design data from OEMs is available would fully materialise and would require to adopt, instead of a relative accurate calculation of the locos retrofit effort (and feasibility), a "best guessing" approach. This would weaken the quality of the CBA and the deployment planning in a potentially substantial way.

It must be added that, at least in the context of the EDDP, neither the JU nor the Commission (and by far not the DACcord project) can force individual companies to publish business information.

The **Activity C4 "Infrastructural and IT adaptations"** could be started after an agreement with the CEOs of the Infrastructure Managers within the Railway Associations EIM and CER (**see D4.1**). A planning of the workstream will be realised in Reporting Period 3.

The **Activity C5 "Placing into service plan"** etc. cannot be sufficiently scoped at the moment and will be started most probably but only partially with the upcoming Pioneer DAC Trains.

## EDDP Work Area C: European coordination for Migration strategies

WORK AREA C: EUROPEAN COORDINATION FOR MIGRATION STRATEGIES		
WORK AREA LEAD: ANDREAS LIPKA		
ACTIVITIES	RESPONSIBLE PERSON	TRAFFIC LIGHT STATUS OVERALL
C1 Fleet Analyses & rtf Engineering (rtf readiness)	Lisa Blumrodt	
C2 Retrofit capacity (workshops, work-force, components)	DACFIT Partner	
C3 Migration strategies & retrofitting	Andreas Lipka	
C4 Infrastructural & IT adaptations	Marcel de la Haye, Bardo Schettini	
C5 Placing into service plan (safety, workforce training, rulebooks etc.)	[...]	

Figure 4. EDDP Work Area C activities

## EDDP Activity C1

ACTIVITY C.1: FLEET ANALYSES & RTF ENGINEERING (RTF READINESS)							OVERALL 
ACTIVITY LEAD: LISA BLUMRODT (DB CARGO)							
WORKSTREAMS	RESPONSIBLE PERSON	SUBSTREAMS	DELIVERABLES	(RESPONSIBLE if applicable)	DEADLINE	STATUS	
						P R B D	
Preliminary technical rail freight fleet analysis	Thorsten Djuren	DACFIT WP 2	Technical rail freight fleet analysis (preliminary summary)	Thorsten Djuren	14.10.2025		
Finalization of technical rail freight fleet analysis	Thorsten Djuren	DACFIT WP 3	Technical rail freight fleet analysis (summary)	Thorsten Djuren	14.10.2026		
Quantitative rail freight fleet analysis	Lisa Blumrodt	DACFIT WP 4	Quantitative rail freight fleet analysis (summary)	Lisa Blumrodt	14.10.2026		
European vehicle fleet upgrading database	Lisa Blumrodt	Intermediate data storage	European vehicle fleet upgrading database	Fraunhofer	14.01.2025		
		Technical general information database setup		Thomas Heydenreich/UIP	30.06.2024		
		EVR-linked database setup/cloning		[...]	[...]		
		Database population (both)		[...]	[...]		
Upgrading engineering solutions all fleet	[...]	Loco engineering FWC	Upgrading engineering solutions all fleet	Currently uncoupled from WA C			
Upgrading special engineering solutions	[...]	[...]	Upgrading special engineering solutions	[...]	[...]		

Figure 5. EDDP Activity C1 planning and monitoring status

## EDDP Activity C2

ACTIVITY C.2: RETROFIT CAPACITY (WORKSHOPS, WORK-FORCE, COMPONENTS)							OVERALL 		
ACTIVITY LEAD: JOACHIM WIRTGEN (VERS)									
WORKSTREAMS	RESPONSIBLE PERSON	SUBSTREAMS	DELIVERABLES	(RESPONSIBLE if applicable)	DEADLINE	STATUS			
						P	R	B	D
Retrofitting processes, times & requirements	Joachim Wirtgen	DACFIT WP 5	Retrofitting processes, times & requirements (wagon summary)	Joachim Wirtgen	14.10.2026				
			Retrofitting processes, times & requirements (loco summary)	Joachim Wirtgen					
Available and Potential Retrofit Capacity	Joachim Wirtgen	DACFIT WP 6	Available and Potential Retrofit Capacity (wagon summary)	Joachim Wirtgen	14.10.2026				
			Available and Potential Retrofit Capacity (loco summary)	Joachim Wirtgen					
			List of 150 hardened suggestions for pop-up workshop sites	Sebastian Hohn	14.07.2025				
Assumption on components need	Wolfgang Alten	Basic package implementation	Updated version of components production description from DACcelerate migration study	Wolfgang Alten	14.01.2025				

Figure 6. EDDP Activity C2 planning and monitoring status

## EDDP Activity C3 (1/2)

ACTIVITY C.3: MIGRATION STRATEGIES & RETROFITTING PLAN							OVERALL 		
ACTIVITY LEAD: ANDREAS LIPKA									
WORKSTREAMS	RESPONSIBLE PERSON	SUBSTREAMS	DELIVERABLES	(RESPONSIBLE if applicable)	DEADLINE	STATUS			
						P	R	B	D
Strategies and boundary conditions	Helge Stuhr	Effects on market participants and mitigation measures	Report on impact on market participants by the individual migration strategies and countermeasures*	Helge Stuhr	31.05.2024 <sup>2)</sup>				
		Alignment with technical component development and authorization strategy	Report on the consideration of migration requirements in FP5, and detected risks for migration	Helge Stuhr	31.05.2024 <sup>2)</sup>				
		Feasibility of a "big bang"	Big bang feasibility report (Strategies, processes, critical resources, and DSS dependencies)	Helge Stuhr	31.05.2024 <sup>2)</sup>				
		Technical and operational alternative solutions	Report on critical strategy issues and on the evaluation of alternative migration approaches	Helge Stuhr	31.05.2024 <sup>2)</sup>				

\* examples: Rail operations in large sidings, impact of traffic demarcation on wagon deployment flexibility and damaged wagon management

Figure 7. EDDP Activity C3 planning and monitoring status (1/2)

### EDDP Activity C3 <sup>(2/2)</sup>

ACTIVITY C.3: MIGRATION STRATEGIES & RETROFITTING PLAN							OVERALL 		
ACTIVITY LEAD: ANDREAS LIPKA									
WORKSTREAMS	RESPONSIBLE PERSON	SUBSTREAMS	DELIVERABLES	(RESPONSIBLE if applicable)	DEADLINE	STATUS			
						P	R	B	D
Developing Implementation plan with Decision Support System	Frederik Schäfer	Transfer of DB nucleus into neutral environment	DACFIT Framework enabled by DSS for informed decision making and planning	Frederik Schäfer	14.10.2025	•	•	•	•
		Align with FHG IML an open-source solution for the time after DACFIT	Aligned suggestion for a DSS IT environment after DACFIT	Frederik Schäfer	31.03.2024	•	•	•	•
Operational pattern per country/stakeholder analysis	tbd within DACFIT	DACFIT WP4 Task 2	Assignment of vehicles to usage patterns (incl. CWS vs. non-CWS), regional distribution and others	tbd within DACFIT	14.10.2025	•	•	•	•
DAC migration solution space	Andreas Lipka	Description of missing input by the DAC project	Overview of missing input by the DAC project	Andreas Lipka	30.04.2024	•	•	•	•
Delivering DAC migration Input to pre-DME work group	Andreas Lipka	Delivering DAC migration Input to pre-DME work group	Summary report on migration requirements for pre-DME	Andreas Lipka	31.05.2024 <sup>2)</sup>	•	•	•	•
Retrofitting (capacity) plan	Andreas Lipka	DACFIT WP 7	Retrofitting (capacity) plan	Frederik Schäfer	14.10.2026	•	•	•	•

Figure 8. EDDP Activity C3 planning and monitoring status (2/2)

### EDDP Activity C4

ACTIVITY C.4: INFRASTRUCTURAL & IT ADAPTATIONS							OVERALL 		
ACTIVITY LEAD: MARCEL DE LA HAYE (CER), BARDO SCETTINI (EIM)									
WORKSTREAMS	RESPONSIBLE PERSON	SUBSTREAMS	DELIVERABLES	(RESPONSIBLE if applicable)	DEADLINE	STATUS			
						P	R	B	D
Development, production and roll-out of infrastructure components and IT adaptations	[...] tbd	[...]				•	•	•	•
		[...]				•	•	•	•
IT backbone for digital components during migration	[...] tbd					•	•	•	•
Vehicle to infrastructure compatibility during migration	[...] tbd	Vehicle to infrastructure compatibility during migration	Report on effects and needed measures depending on changes to vehicles (e. g. authorization for > 90 tons locos)			•	•	•	•

JNS regular procedure to launch, currently alignments within EIM ad CER

Figure 9. EDDP Activity C4 planning

## EDDP Activity C5

ACTIVITY C.5: PLACING INTO SERVICE PLAN (SAFETY, WORKFORCE TRAINING, RULEBOOKS ETC.)							OVERALL			
ACTIVITY LEAD: [...]							●			
WORKSTREAMS	RESPONSIBLE PERSON	SUBSTREAMS	DELIVERABLES	(RESPONSIBLE if applicable)	DEADLINE	STATUS				
						P	R	B	D	
General framework, GCU, SMS etc. adaptation	[...]	[...]	[...]	[...]	[...]	●	●	●	●	
General ground staff training preparation	[...]	[...]	[...]	[...]	[...]	●	●	●	●	
General workshop staff training preparation	[...]	[...]	[...]	[...]	[...]	●	●	●	●	
[...]	[...]	[...]	[...]	[...]	[...]	●	●	●	●	
[...]	[...]	[...]	[...]	[...]	[...]	●	●	●	●	
[...]	[...]	[...]	[...]	[...]	[...]	●	●	●	●	
[...]	[...]	[...]	[...]	[...]	[...]	●	●	●	●	

*Draft / set-up along with pre-deployment trains planning*

Figure 10. EDDP Activity C5 planning

## 5.1.2. EDDP / DAC migration roadmap Work Area D

In work area D, Activity D1 (funding and financing plan) could not deliver considerable progress on the “full deployment” workstream (due to the lack of identifiable funding and financing resources).

On the contrary it is possible that the funding/financing source for the Pioneer Trains via Connecting Europe Facilities (CEF) – see D4.1 - could lead to a result (Figure 12). Further progress on the Pioneer DAC Trains establishment will be reported in Reporting Period 3, as any potential project is likely to materialise in summer/autumn 2025 only.

**Activity D2** encompasses the CBA. A study on DAC Life Cycle Costs (work from FP5 WP19) has been presented to the EDDP Programme Board on 11/03/2025. The result has been reviewed by external experts and sent back for revision to the FP 5 consortium (revision expected by mid-September 2025). As it does not (yet) rely on a fully industrialised DAC production layout (due to the lack thereof), **it was decided not to update the CBA in Q1/2025** (Figure 13).

For the **Activities D3** (Investment plan & procurement framework plan) **and D4** (Other regulatory framework plans), any planning remains too early at this stage (Figure 11). Investment/procurement planning for full deployment can be prepared when the Pioneer DAC Trains have proven the fulfilment of the EDDP preconditions. The Pioneer Train project will certainly provide initial input to such planning. The planning horizon is therefore rather out of scope of the DACcord project. Other regulatory frameworks (incl. General Contract of Use / GCU) will also be better identified during the Pioneer Trains.

WORK AREA D: FUNDING AND FINANCING		
WORK AREA LEAD: ESTELLE BACCONNIER		
ACTIVITIES	RESPONSIBLE PERSON	TRAFFIC LIGHT STATUS OVERALL
D1 Funding & Financing plan	[...]	
D2 CBA (updates)	Mitchell van Balen	
D3 Investment plan & procurement framework plan	[...]	
D4 Other regulatory & legal framework plans	[...]	

Figure 11. EDDP Work Area D overview

ACTIVITY D.1: FUNDING & FINANCING PLAN										
ACTIVITY LEAD: ESTELLE BACCONNIER										
WORKSTREAMS	RESPONSIBLE PERSON	SUBSTREAMS	DELIVERABLES	(RESPONSIBLE if applicable)	DEADLINE	STATUS				
						P	R	B	D	
DAC Funding and financing (F&F) sources		Pioneer DAC trains	List of F&F sources for pioneer DAC trains (CEF and others)	?	18.06.2024 27.06.2024?					
		Full deployment	List of F&F sources for full DAC deployment (CEF and others)	?	Q3 2024 (New EC) 2025 (MAFF)					
DAC in new EC work programme			Draft / not yet agreed							

Figure 12. EDDP Activity D1 (draft) planning

ACTIVITY D.2: CBA (UPDATES)									
ACTIVITY LEAD: MITCHELL VAN BALEN									
WORKSTREAMS	RESPONSIBLE PERSON	SUBSTREAMS	DELIVERABLES	(RESPONSIBLE if applicable)	DEADLINE	STATUS			
						P	R	B	D
Review of CBA assumptions	Mitchell van Balen	Migration strategy	Revised CBA model, based on WP3 inputs	EDDP WP3	Q1 2025				
		Costs	Revised CBA model, based on FP5 inputs	FP5-WP19	Q4 2024				
		Time savings / train numbers	Revised CBA model, based on WP5 inputs	EDDP WP5	Q3 2024				
		Transport volumes (esp. for CT)	Revised CBA model, based on WP5 inputs	EDDP WP5	Q3 2024				
Further Economic Studies	[...]	Industrialisation effect of DAC	Study detailing the Industrialisation effect of DAC	UNIFE	[...]				
	[...]	Modal shift study	Study detailing the effects of DAC on accelerating the modal shift	UIC	[...]				
Update of CBA '24-'25	Mitchell van Balen	Reporting	Revised Report 2024-2025	Mitchell van Balen	Q2 2025				

Figure 13. EDDP Activity D2 planning (1/2)

Different (company and harbour) case studies have been conducted, showing a varying impact of DAC (Figure 14). It will be decided together with the EU-Rail JU and the EC when in Reporting Period 3 the results will be reported to the EDDP Boards.

ACTIVITY D.2: CBA (UPDATES)									
ACTIVITY LEAD: MITCHELL VAN BALEN									
WORKSTREAMS	RESPONSIBLE PERSON	SUBSTREAMS	DELIVERABLES	(RESPONSIBLE if applicable)	DEADLINE	STATUS			
						P	R	B	D
Intermodal Case Studies	Nicolas Gohel	Kombiverkehr	Report on case studies	Nicolas Gohel	Q4 2024				
		Samskip	Report on case studies	Nicolas Gohel	Q3 2024				
		Metrans	Report on case studies	Mitchell van Balen	Q2 2024				
		MERCITALIA	Validation of inputs but no detailed case study	Nicolas Gohel	Q3 2024				
		BLS Cargo	Report on case studies	Nicolas Gohel	Q3 2024				
Maritime port case studies	Nicolas Gohel	8 ports, incl 2 visits	Port report, annex to CBA report	Nicolas Gohel	Q2 2024				
Pioneer DAC Trains case studies	Nicolas Gohel	1 per pioneer train	Report on case studies	Nicolas Gohel	2025ff				

Figure 14. EDDP Activity D2 planning (2/2)

### 5.1.3. Risk management

Regular catch-up meetings on the progress of the work **in Work Areas C & D** for **managing the delivery risk for the related deliverables** and for the preparation of the various topics of the EDDP work programme in view of decisions in board meetings were scheduled throughout the year (participants: work area lead & co-lead participated, often assisted by other work area members).

They were complemented with various additional in-depth meetings on specific work area topics. Status updates from those meetings were integrated in the subsequent board meetings. The **Work Area C & D alignment meetings** in reporting period 2 took place (mainly via videoconference) on

April 2024	08, 12, 17, 22, 24	October 2024	07, 09, 15
May 2024	03, 21, 28	November 2024	04, 05
June 2024	16, 17, 25	December 2024	06
July 2024	01, 05	January 2025	06, 10, 15, 23, 24
August 2024	12, 13, 19, 20, 27	February 2025	13, 19, 25
September 2024	12, 13	March 2025	05, 11, 25

The monitoring of the progress in the different EDDP workstreams and assessing the risk of (non-) achievement is essential, but **these parts of the EDDP need to be integrated, as planned and announced, into the bigger programme risk perspective** FP5, EDDP work areas and System Pillar Task 4 (SP T4). Only such integrated view can identify the critical and urgent items and path across all DAC-related activities, and therefore requires an **overall programme risk management system**.

Such an overarching system was installed in November 2024, **see in detail D4.1 on Programme/ Risk Management**. This system encompasses all risks from EDDP Migration Roadmap areas including their assessment on probability and severity and impact on the overall programme in the shorter (Pioneer Trains) and longer perspective (full deployment). Figure 15 shows an extract of the Work Area D and C workstreams and their risks in the overall risk log (top risks in blue).

Figure 16 depicts again the **DAC DFETO top risks map** with the top risks from the Migration Roadmap (see middle of the picture).

The major risks for the Pioneer DAC Trains and a potential ko-risk for the full deployment are – as said in the previous chapter – the knowledge about

- the technical state of the loco fleet
- the retrofittability of the legacy vehicle fleet and
- the quantity of concerned vehicles, a clearly essential input into any migration planning.
- the availability of funding & financing for Pioneer DAC Trains and full deployment.

These risks and the state of play of the mitigating measures will be followed-up in the joint risk management workshops, which includes (of course) also the DACFIT project Coordinator(s).

STEP 01: RISK IDENTIFICATION										STEP 02: RISK EVALUATION				
ID	Category	Risk Origin	Title	risk for FP5	risk for full deployment	Raised by	Responsible	Impact Description	Probability	Severity (time)	Severity (budget)	Severity (scope)		
20	External	B. 2. (Stakeholder Mgmt.)	Tasking	YES	YES	10.11.2024	EDDP/PM	Strong delay or cancellation of full deployment	Medium	+100 years	no budget required	no DAC		
29F	Technical	C. 1 (Fleet Analysis and RfT Eng)	European Loco Fleet Technical State unknown	YES		10.11.2024	EDDP	Delay or impossibility to start loco retrofit	High	+10 years	- x bn budget required	- x vehicle types		
29F	Technical	C. 1 (Fleet Analysis and RfT Eng)	European Loco Fleet Technical State unknown	YES		10.11.2024	EDDP	Delay or impossibility to start loco retrofit	High	+10 years	+ xx bn budget required	- x vehicle types		
26	Technical	C. 1 (Fleet Analysis and RfT Eng)	Wagon Fleet Technical State unknown	YES		10.11.2024	EDDP	Delay or impossibility to start wagon retrofit	Medium	+10 years	+ xx bn budget required	- x vehicle types		
27	Technical	C. 1 (Fleet Analysis and RfT Eng)	Vehicle Quantities unknown	YES		10.11.2024	EDDP	No quantification of budget and migration planning possible	Medium	+ 1 year	+ xx mn EUR			
28	Organisational	C. 1 (Fleet Analysis and RfT Eng)	Geographical scope of migration/vehicle fleet missing	YES		10.11.2024	EDDP/PM	Insufficient consideration of European vehicle fleet for migration + impact on migration scenarios and operations.	Medium	+ 2-4 years	+ 300 mn EUR			
34	Technical	C. 2. (Retrofit capacity)	For loco stock integration	YES		10.11.2024	EDDP/PM	Longer auth. and certification times and higher costs per retrofitable loco type	High	+15 years per loco type	+0.5 mn EUR per loco type	- x loco types		
35	Technical	C. 3 (Migration strategies & RfT)	Non-compliance with requirements for a full roll-out leading to technology/redesign	YES		27/01/2025	EDDP/PM	FP5 products not designed for minimally invasive implementation in an existing system of productively used existing vehicles require later improvements with time and costs increase	High	tdb	tdb	tdb		
36	Technical	C. 3 (Migration strategies & RfT)	Missing standardized interface in the power and data system parallel to interface A, of the mechanical connection	YES		27.01.2025	EDDP	Increase in cost for the loco power/data connection of the coupling head (with the spring assembly mounted in the vehicle) both during the migration phase and afterwards during maintenance. If a standardized interface is not defined at this appropriate time, it will be more expensive to prepare the mechanical connection and will be more difficult to implement.	?					
37	Operational	C. 3 (Migration strategies & RfT)	Missing loco migration strategy & retrofit plan	YES		08.11.2024	E. Lohmeier	Delay or impossibility of deployment	High					
38	Operational	C. 3 (Migration strategies & RfT)	Size of the vehicle fleet for big bang retrofit unknown	YES		10.11.2024	EDDP	European wagon fleet as separability of traffic flow/fleet is not sufficient for a big bang retrofit	High	+100 years	-10 bn budget required	no DAC		
39	Organisational	C. 3 (Migration strategies & RfT)	Missing coordination between DAC/ETCS/FRMCS retrofit and authorisation	YES		10.11.2024	EURAIL Deployment Group	Availability of assets disrupted due to misalignment between ETCS/DAC/FRMCS programmes. Workshop and auth. capacities cannibalized. Potentially operational disruptions. Missed opportunity for synergies in retrofitting operations leading to excessive costs	High	+ 3-6 years		No ERTMS		
40	Technical	C. 4 (Infrastructure & IT adaptation)	Infra & IT adaptations unknown	YES		10.11.2024	EDDP/PM	Infra & IT not prepared. IMs not prepared to arrival of DAC	High	+ x years	+ y mn EUR			
44F	Financial	D. 1 (Funding & Financing P)	Not enough EU and national funding and financing available	YES		10.11.2024	EDDP/PM	Postponement or cancellation of the full deployment	High	+100 years	-13 bn EUR budget required	no DAC		
45	Financial	D. 1 (Funding & Financing P)	No decision on funding of DAC ready for all new vehicles	YES		10.11.2024	EDDP	All current and future new built vehicles not "DAC ready" after DAC ready technical definition due to non-availability of funding need to be retrofitted more expensively	High					
46	Financial	D. 1 (Funding & Financing P)	Decision on funding of DAC full deployment incl. Deployment Manager	YES		10.11.2024	EDDP	No funding, no DAC	High	+100 years	-13 bn EUR budget required	no DAC		

Figure 15a. All DAC-related activities risk log (extract with some DAC Migration Roadmap risks)

STEP 03: RISK MITIGATION				
Mitigations	Highly and not mitigatable in appropriate timespan	EDDP PB/ SB category	Mitigation Due Date	Mitigation traffic light status
Demonstrate operational benefits of DAC at 10-20 top customers		Information	11.03.2025	Yellow
- Accelerate analyses of installation requirements/stability - Regular report in EDDP PB/ SB - Organise exchange between DACFit and Industry partners <b>- High level meeting EC/ERA/JU/EDDP with loco OEMs to enable access to data</b> <b>- Ensure funding for analysis + engineering of loco OEMs and legacy locos.</b>		Information <b>Decision</b>	26.11.2024 + all PB/ SBs	Yellow
	KO	Information <b>Decision</b>	26.11.2024 + all PB/ SBs	Yellow
- Accelerate analyses of installation requirements/stability - Regular report in EDDP PB/ SB - Organise exchange between DACFit and Industry partners <b>- Ensure funding for analysis + engineering of wagon OEMs and legacy wagons.</b>		Information	26.11.2024 + all PB/ SBs	Yellow
- accelerate analyses of installation requirements/stability - regular report in EDDP PB/ SB		Information	26.11.2024 + all PB/ SBs	Yellow
<b>Ensure Board decision / reconfirmation (done in PB November 24 )</b>		<b>Decision</b>	26.11.2024 + all PB/ SBs	Green
Design independent non-integrated data/communication solutions for locos		<b>Information</b>	?	
Comprehensive requirements management in Polario, taking into account and discussing all requirements from the relevant areas of expertise in the fields of rail maintenance, rail freight operations and migration planning.	<b>KO?</b>	<b>Decision</b>	<b>11.03.2025</b>	Green
FDFTO PM assures that a "Digital Interface A SPEC" is developed and first prototypes are being delivered in spring 2025 to be tested in FP5 and <del>respective derailment tests</del> and mix & match tests are made in DACtivate.	<b>KO?</b>			Yellow
Generate input about DAC/additional components for analysis, dependency of risk 23 solution and of new included 2 risks after 23 (without number yet)	<b>KO</b>			Yellow
Workstream "separability of traffics" to be set-up properly: clear traffic pattern with related fleet per country	<b>KO?</b>	Information	01.12.2025	Red
Ensure vehicle analysis is performed as joint exercise		Information	Q2 2025	Red
Set up work plan for C4 Include owner of WP yard automations from FP5	<b>KO</b>	Information	10.06.2025	Yellow
- lobby national and EU public authorities for appropriate grants (e.g. in the context of the new MFF) - Best mitigation is a proof via PDTs	KO			Red
? Decide on funding/enforcing of "DAC ready" for new-built after PDTs feedback (ca. as of 2028/29) allocate respective funding in next MFF			01.06.2025	Red
? Decide on funding/enforcing of DAC deployment after PDTs (ca. as of 2028/29) and accepted DAC migration plan allocate respective funding in next MFF		?	<b>01.06.2025</b>	Red

Figure 16b. All DAC-related activities risk log (extract with some DAC Migration Roadmap risks)

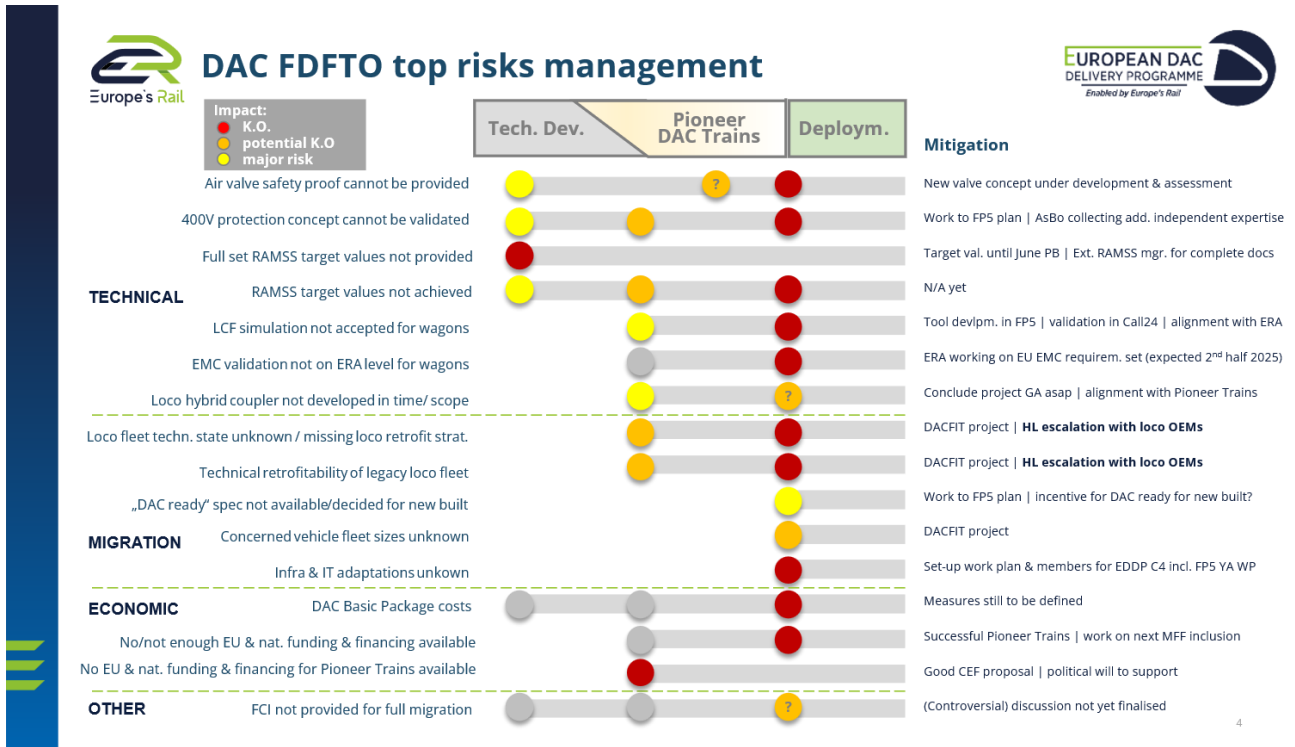


Figure 17. DAC DFOTO top risks map with impact point in time and mitigation measures

## 5.2. Regular consolidation of migration assumptions for EDDP boards

The DACcord task consisted in “Consolidating regularly the existing basic migration assumptions, findings, reports principles/boundary conditions (instruments, methods, tools, e.g. target scenario, tech packages, retrofit plan, legal and financing instruments, major criteria/ options for overall migration scenario optimisation, ...) for EDDP boards” (cf. Grant Agreement).

As the different EDDP boards agendas (see Annex 1) demonstrate, all relevant and upcoming migration issues were permanently prepared and reported on board level. The precise migration assumptions dealt with in the EDDP programme boards are reported below, together with their agenda topic number. These topics were partially discussed in the Supervisory Boards in a summarised way.

No progresses in Work Area D were reported to the Boards (reasons see 5.1).

### EDDP Programme Board 25/04/2024

- |                                                                      |                    |              |
|----------------------------------------------------------------------|--------------------|--------------|
| 6. Results of call “DAC fleet retrofitting & retrofit capacity plan” | <b>information</b> | [EU-Rail]    |
| 7. Updated EDDP detail planning for work areas C + D                 | <b>information</b> | [PM/EU-Rail] |

### EDDP Programme Board 26/06/2024

- |                                                                     |                    |             |
|---------------------------------------------------------------------|--------------------|-------------|
| 4. C1: migration roadmap   quantitative fleet analysis              | <b>information</b> | [EDDP WA C] |
| 5. C1: migration roadmap   Europ. vehicle fleet upgrad. database    | <b>information</b> | [EDDP WA C] |
| 6. C3: migration roadmap   tech/operat. alternat. Migrat. solutions | <b>information</b> | [EDDP WA C] |

### EDDP Programme Board 17/09/2024

- |                                                                   |                    |                  |
|-------------------------------------------------------------------|--------------------|------------------|
| 4. C: Overall activities planning/sequencing + preconditions      | <b>information</b> | [PM / EDDP WA C] |
| 5. C1: migration roadmap   DACFIT: state of play, data governance | <b>endorsement</b> | [DACFIT PM]      |
| 6. (C1): overview on DAC related projects & locomotive solutions  | <b>information</b> | [EU-Rail]        |

### EDDP Programme Board 26/11/2024

- |                                                                       |                    |             |
|-----------------------------------------------------------------------|--------------------|-------------|
| 5. C1-C2: migration roadmap   Fleet anal, Retrof. Capa: state of play | <b>information</b> | [DACFIT PM] |
| 6. C1: migration roadmap   Geogr. scope of migration/vehicle fleet    | <b>decision</b>    | [DACFIT PM] |

### EDDP Programme Board 11/03/2025

- |                                                                 |                    |             |
|-----------------------------------------------------------------|--------------------|-------------|
| 6. C: Migration roadmap                                         |                    |             |
| a) Reconfirmation of working assumptions for migration          | <b>information</b> | [WA C]      |
| b) Development of migration scenarios                           | <b>information</b> | [PM]        |
| c) Overarching requ. mts mgmt. in Polarion + first requirements | <b>decision</b>    | [WA C]      |
| d) DACFIT - State of play                                       | <b>information</b> | [DACFIT PM] |
| 8. Manual uncoupling version for PDTs and migration             | <b>decision</b>    | [FP5]       |



Either the retained topics

- are already work in progress (e. g. authorisation/FP5, RAMSS target values/FP5, technical fleet state/DACFIT, retrofit times/DACFIT etc.) or
- needed to be stipulated in addition for EDDP Boards decision (e. g. the closer definition of the geographical scope for the DACFIT fleet analysis or a decision on the precise version of manual uncoupling from wagon side to be considered for migration planning – **see chapter 5.2 - or**
- are part of already upcoming projects (e. g. loco hybrid coupler)

Not all topics marked “D” have, after further discussion, been retained as decisions (e. g. the installation of the C4 activity - solved on working level). Some of the proposed decisions still need to be thoroughly prepared in the future, e. g. the introduction of a unique vehicle identity/identifier in Europe.

With this result and in respect of other various insights over the past period, the following topics were identified as **major criteria for migration optimisation**, impacting target picture and GMP (Figure 18):

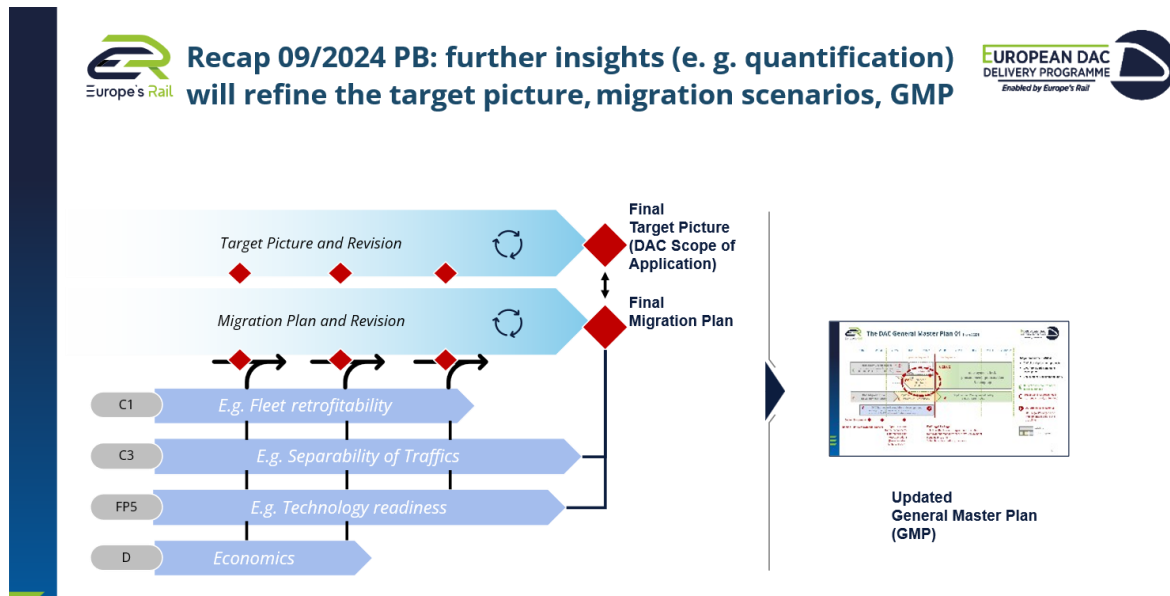


Figure 19. Criteria for overall DAC migration optimisation

- An **unknown technical fleet state and retrofittability** (addressed in Activity C1/DACFIT) lead to an unknown amount of budget and time to retrofit the foreseen number of assets
- An unknown **separability of traffics** (addressed in Activity C3) leads to an unknown size of mixed traffic and therefore an unknown size of vehicles to plan for “big bang” retrofit, therefore a different target picture
- An insufficient **technology readiness** for the foreseen start of migration leads either to a reduced technical scope for migration or a delay
- A **too expensive DAC Basic Package** beyond the accepted level of the CBA might lead to scope reductions or, in worst case and if costs outweigh the benefits, in programme cancellation
- an **insufficient level of funding an financing** can lead to a reduction in retrofit scope/amount (target picture) or to a programme cancellation

**These criteria are logically and coherently - as shown in the previous chapter - part of the overall programme's top risks. As they are vital for the optimisation and for the “survival” of the programme, they are therefore under permanent monitoring, evaluation and reporting in EDDP.**

**Any further criteria for optimisation will be relevant only in a second stage, after these main criteria have been successfully resolved/answered respectively determined.**

The degree of progress (resp. implementation) on most of these criteria will be part, as said, of the overall FDFTO/EDDP/FP5 etc. regular risk management, which entails all DAC-related projects.

- **Technical fleet state** is part of the DACFIT activities AND of the risk management exercise AND under regular board reporting; any potential escalation required would be part of DACcord reporting period 3. If no solution could be found until the end of DACcord, this topic would need to be handed over as “open” to a potential successor project
- **Separability of traffics** will be reported in the boards as soon as WA C results are available
- **Technology readiness** is main regular part of the overall risk management and regular reports
- **DAC Basic Package (serial) price** can only realistically be established when technology is finalised after feedback from Pioneer Trains and a general funding scheme and serial production are in sight/under preparation (all happening after the DACcord project)
- **Funding levels** for Pioneer Trains will be known in DACcord reporting period 3; Funding levels for full deployment might be known only after the Pioneer Trains (after end of DACcord)

## 5.4. Cross-checks FP5 FDFTO / migration roadmap actions

The DACcord task consisted in “Organising regular cross-checks between FP5 FDFTO and the different migration roadmap actions” (cf. Grant Agreement).

These cross-checks have now, as depicted in the previous chapters, been **transferred and institutionalised in the regular quarterly, overall FP5/EDDP/SPT4 risk management workshops**.

Nevertheless, in continuation of the “input of migration requirements into FP5” activity which had taken place in Reporting Period 1 as a consequence of the interaction with FP5, and besides individual contacts that took place between the working environments, further migration requirements were addressed to the FP5 technology development in Reporting Period 2 via EDDP Board decision.

The respective EDDP Board decision was taken in **EDDP Programme Board 11/03/2025** under the topic

*C: Migration roadmap*

*c) Overarching requ.mts mgmt. in Polarion + first requirements* **decision** [WA C]

This decision should serve as starting point to record these requirements in a “reserve list for technology development”, pertaining to full deployment and to be taken up for later mass serial production once the basic technology development has been successfully achieved.

In order not to lose such upcoming further requirements “on the way of technology development”, a place for recording these requirements is needed and has been stipulated for decision first (“**overarching requirements management**” in the FP5 Polarion Tool) (Figure 19).

The **proposed/decided three technical requirements** are based on the assumption of a valid target picture of full DAC deployment on a large amount of vehicles across Europe. For easing the full deployment in this target picture, four migration methods were envisaged by the former DACcelerate project (direct DAC retrofit/new built, DAC ready preparation, wagon pairing, wagon swapping).

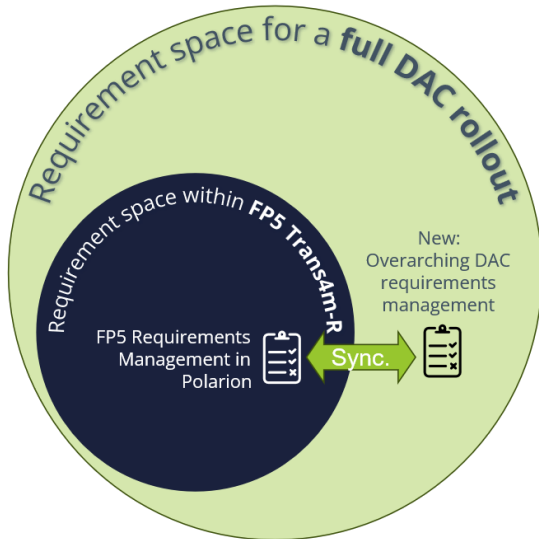
The proposed three technical requirements shall support these methods and enable the minimisation of overall retrofit time and ease of supply logistics in a full deployment scenario (Figure 20):

- Avoiding of welding during the DAC mounting process (just screwing)
- Pre-assembly of necessary wiring harnesses prior to DAC mounting instead of individual cables
- Placing the additional DAC components (beyond the coupler itself) at one single place on the wagon (this requirement was addressed for detail discussion with FP5)

Any upcoming requirements on DAC technology in Reporting Period 3 deriving from findings in the critical areas (e. g. fleet technical state, retrofittability, ...° would then be addressed for recording in the overarching requirements management and for development upon budget and resources.



## Solution proposal: Usage of the existing Polarion tool as an overarching requirements management



### Proposed solution:

- Overarching DAC requirements management for all – this minimizes future changes
- Indication for each requirement whether it is covered in a DAC project (e.g. FP5)
- Filter option for all requirements that have not yet found a "landing site"

### Potential implementation:

- Creation of a new system, synchronization with Polarion necessary for requirements accepted there (automatically or manually)
- Usage of FP5 Polarion with respective amendments (e.g., focus information, potentially own repository)

34

Figure 20. Overarching requirements management for DAC technology

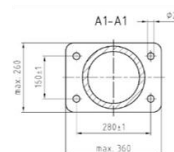


## To ensure a cost-saving and efficient migration process, several technical conditions are assumed



The DACFIT project needs realistic **working assumptions** on mounting conditions for calculating process times, workshop capacities and vehicle absence times (details: backup). **Better solutions are always welcome.**

- 1) Screwing instead of welding:** The DAC itself should be connected to the vehicle by screwing, not welding. Welding shall be used only in cases defined later (e.g. to reinforce a vehicle underframe for better dissipation of longitudinal compressive forces), but not for the DAC itself.
- 2) Pre-assembled wiring harnesses are to favour over individual cables.** The cables for power and data in the vehicle must be delivered to the workshops pre-assembled instead of cables on reels
- 3) The additional components for wagons are placed at the buffer beam where the buffers were** This cheap, quick and foolproof place option allows maximal standardization and later maintainability.



37

Figure 21. Examples for input from EDDP migration to FP5

## 6. Conclusions

In the second DACcord project year M13 to M24, it was possible to refine and drive further the DAC migration roadmap and its different work areas, now also constituting the indispensable basis for any kind of progress monitoring.

Due to the launch of important supporting EU-Rail JU projects, e. g. DACFIT on fleet and workshop analysis, which reflect 1:1 the requirements laid down in the Migration Roadmap planning, some substantial work results from work area C can now hopefully be achieved in the third DACcord reporting period (M25-M36). The degree of success of this “supply project to the migration roadmap” will depend severely from the preparedness of the vehicle manufacturers to cooperate on the technical analysis. An eventual need for escalation needs to be assessed in Reporting Period 3 in function of the further intermediate results.

Due to the specific difficulties in the Work Area D (economics) to identify resources for substantial funding & financing, further work needs to be done as well, especially on budgetary resources for a full deployment.

Overall the activities from the Migration Roadmap could now be integrated into the regular overall and overarching FP5/EDDP/SPT4 risk management.

In this risk management, the main 4 identified criteria for migration scenario optimisation (technology readiness, technical fleet state, funding/financing and, implicitly, separability of traffics) have been integrated as top risks and are therefore fully reflected in the overall programme management portfolio.

The **next steps** in the DAC migration roadmap management in the upcoming reporting period are consequently:

- › Further delivery of the migration roadmap actions in the different work areas, especially via the DACFIT project, which has a predominant impact on the feasibility of the EDDP/DAC deployment aspirations
- › Seamless integration of further new EU-Rail projects supporting the migration roadmap
- › “living” the overall risk management system and managing carefully the mitigation measures, here: especially for the migration roadmap.

It is possible that certain results from the migration roadmap have a go/no go influence on the (full deployment) programme already in Reporting Period 3.

The work will be continued in the DACcord WP8 in the project months M25 to M36 and be summarised in the DACcord deliverable D8.1.



## 7. References

For an overall information on the programme and its related work areas, refer to:

<https://rail-research.europa.eu/european-dac-delivery-programme/>

All project deliverables can be found in the related parts of the Europe's Rail Cooperation Tool IT environment (programme members only).

## 8. Appendices

### EDDP Programme Board agendas

 <b>PB Agenda</b>		
1. Introduction, Welcome, adoption of the Agenda		[EU-Rail/EC]
2. Review of actions since the last PB		[EU-Rail/PM]
<b>FP5-TRANS4M-R/FDFTO</b>		
3. E-Coupler decision	<i>point type</i>	[FP5]
4. D2.3 Architecture & D2.2 User Requirements	<b>endorsement</b>	[FP5]
5. Sounding boards results	<b>information</b>	[FP5]
<b>EDDP AND MIGRATION ROADMAP</b>		
6. Pre-Deployment Trains Concept + Plan	<b>information</b>	[PM/EU-Rail]
7. Definition of SPoCs	<b>information</b>	[PM]
8. Results of call "DAC fleet retrofitting & retrofit capacity plan"	<b>information</b>	[EU-Rail]
9. Updated EDDP detail planning for work areas C + D	<b>information</b>	[PM/EU-Rail]
10. EDDP stakeholder management plan + actions	<b>information</b>	[PM/DACcord]
11. Review Connecting Europe Day 02/04 & state of play Innotrans	<b>information</b>	[PM/EU-Rail]
<b>System Pillar (Task 4)</b>		
12. --	--	[SP Task 4]
13. AOB and closing		[All]

Figure 22. EDDP Programme Board agenda 25/04/2024

 <b>PB Agenda</b>		
1. Introduction, Welcome, adoption of the Agenda		[EU-Rail/EC]
2. Review of actions since the last PB		[EU-Rail/PM]
<b>EDDP and migration roadmap</b>		
3. G: State of play 100 pioneer DAC trains incl. debrief EC meeting	<i>point type</i>	[EU-Rail/EC]
4. C1: migration roadmap   quantitative fleet analysis	<b>information</b>	[EDDP WA C]
5. C1: migration roadmap   European vehicle fleet upgrading database	<b>information</b>	[EDDP WA C]
6. C3: migration roadmap   tech/operational alternative migration solutions	<b>information</b>	[EDDP WA C]
7. B diverse subjects: risk management, stakeholder management	<b>information</b>	[PM]
8. B2: Report on NCP kick-off meeting	<b>information</b>	[EC/EU-Rail/PM]
9. B2: Communication/dissemination 2024 - State of Play InnoTrans	<b>information</b>	[PM/EU-Rail]
<b>FP5-TRANS4M-R/FDFTO</b>		
10. Sounding board results	<b>information</b>	[FP5]
<b>System Pillar (Task 4)</b>		
11. --	<b>information</b>	[SP Task 4]
12. AOB and closing		[All]

Figure 23. EDDP Programme Board agenda 26/06/2024

## PB Agenda



- |                                                                          |                    |                  |
|--------------------------------------------------------------------------|--------------------|------------------|
| 1. Introduction, Welcome, adoption of the Agenda                         |                    | [EU-Rail / EC]   |
| 2. Review of actions since the last PB                                   |                    | [EU-Rail / PM]   |
| <b>EDDP and migration roadmap</b>                                        |                    |                  |
| 3. D1: Draft concept fun.& fin. models / (pre-)deployment mgmt. entity   | <i>point type</i>  | [EU-Rail/EC]     |
| 4. C: Overall activities planning/sequencing + preconditions             | <b>information</b> | [PM / EDDP WA C] |
| 5. C1: migration roadmap   DACFIT: state of play, data governance        | <b>endorsement</b> | [DACFIT PM]      |
| 6. (C1): overview on DAC related projects & locomotive solutions         | <b>information</b> | [EU-Rail]        |
| 7. B1: General DAC Master Plan – evaluation for autumn 24                | <b>information</b> | [PM / EU-Rail]   |
| 8. B2: Communication/dissemination 2024   <b>State of Play InnoTrans</b> | <b>information</b> | [PM / EU-Rail]   |
| <b>FP5-TRANS4M-R/FDFTO</b>                                               |                    |                  |
| 9. D5.1-5.5 etc. Final Coupler Specification (update)                    | <b>information</b> | [FP5]            |
| <b>System Pillar (Task 4)</b>                                            |                    |                  |
| 10. State of play, especially on FCI                                     | <b>information</b> | [SP Task 4]      |
| 11. AOB and closing                                                      |                    | [All]            |

TLP gelb (Adressatenkreis)

3

Figure 24. EDDP Programme Board agenda 17/09/2024 (on-site in Vienna/ÖBB Headquarters)

## PB Agenda



- |                                                                                |                    |                |
|--------------------------------------------------------------------------------|--------------------|----------------|
| 1. Introduction, Welcome, adoption of the Agenda                               |                    | [EU-Rail / EC] |
| 2. Review of actions since the last PB                                         |                    | [EU-Rail / PM] |
| <b>EDDP and migration roadmap</b>                                              |                    |                |
| 3. B1: EDDP/FP5/SPT4 Risk Management Workshop – state of play                  | <i>point type</i>  | [PM]           |
| 4. B1: General DAC Master Plan – possible impact on GMP 02                     | <b>information</b> | [PM / EU-Rail] |
| 5. C1-C2: migration roadmap   Fleet analyses, Retrofit Capacity: state of play | <b>information</b> | [DACFIT PM]    |
| 6. C1: migration roadmap   Geographical scope of migration/vehicle fleet       | <b>decision</b>    | [DACFIT PM]    |
| <b>FP5-TRANS4M-R/FDFTO</b>                                                     |                    |                |
| 7. FP5-TRANS4M-R: Status and Overview SB 2024                                  | <b>information</b> | [FP5]          |
| <b>System Pillar (Task 4)</b>                                                  |                    |                |
| 8. Operational Rulebook - State of Play                                        | <b>information</b> | [SP Task 4]    |
| 9. AOB and closing                                                             |                    | [All]          |
| - PB / SB dates 2025                                                           |                    |                |
| - Draft EDDP Work Programme 2025                                               |                    |                |
| - EU-Rail Call for Tender “engineering solutions for DAC”                      |                    |                |

3

Figure 25. EDDP Programme Board agenda 26/11/2024



## PB Agenda

1. Introduction, Welcome, adoption of the Agenda
2. Review of actions since the last PB

### EDDP and migration roadmap

3. B1: DAC DFDTO Risk Management Workshop | state of play
4. B1: Suppliers' cross-licence agreement| state of play
5. FP5 WP19 results (LCC)
6. C: Migration roadmap
  - a) Reconfirmation of working assumptions for migration
  - b) Development of migration scenarios
  - c) Overarching requirements management in Polarion + first requirements
  - d) DACFIT - State of play

### FP5-TRANS4M-R/DFDTO

7. FP5-TRANS4M-R | state of play
8. Manual uncoupling version for PDTs and migration
9. FA5 WS – Definition of future waves for projects

### System Pillar (Task 4)

10. State of Play
11. AOB and closing

### backup

12. B2: Stakeholder management | DAC Fora + NCPs – State of play

*point type*

**information**  
**information**  
**information**

**information**  
**information**  
**decision**  
**information**

**information**  
**decision**  
**information**

**information**

**information & action**



[EU-Rail / EC]  
[EU-Rail / PM]

[PM]  
[FP5 SPOC 4]  
[FP 5 WP19]

[WA C]  
[PM]  
[WA C]  
[DACFIT PM]

[FP5]  
[FP5]  
[EU-RAIL]

[EU-RAIL]  
[AI / EU-RAIL]

[PM]

3

Figure 26. EDDP Programme Board agenda 11/03/2025

## EDDP Supervisory Board agendas

 <b>SB Agenda</b>	
1. Introduction, Welcome, adoption of the Agenda	[EU-Rail/EC]
2. Review of actions since the last SB	[EU-Rail/PM]
<b>FP5-TRANS4M-R/FDFTO</b>	
3. E-Coupler decision	<i>point type</i> <b>decision</b> [FP5]
<b>EDDP and migration roadmap</b>	
4. G: State of play 100 pioneer DAC trains incl. debrief EC meeting	<b>information</b> [EU-Rail/EC]
5. Summary of the exchange in the 25/04/24 Programme Board	<b>information</b> [EU-Rail/PM]
6. Summary of the exchange in the 26/06/24 Programme Board	<b>information</b> [EU-Rail/PM]
7. B2: EDDP stakeholder management plan + actions	<b>information</b> [PM/DACcord]
8. B2: Report on NCP kick-off meeting	<b>information</b> [EC/PM]
9. B2: Communication/dissemination 2024 - State of Play InnoTrans	<b>information</b> [PM/EU-Rail]
<b>System Pillar (Task 4)</b>	
10. --	
11. AOB and closing	[All]

Figure 27. EDDP Supervisory Board agenda 03/07/2024

 <b>SB Agenda</b>	
1. Introduction, Welcome, adoption of the Agenda	[EU-Rail / EC]
2. Review of actions since the last PB	[EU-Rail / PM]
<b>EDDP and migration roadmap</b>	
3. D1: Draft concept fun.& fin. models   CEF call publication	<i>point type</i> <b>information</b> [EC]
4. D1: Reaching out to MS for DAC fun/fin   feedback from SB members	<b>information</b> [SB members]
5. B1: Summary of the exchange in the 17/09/24 Programme Board	<b>information</b> [PM / EU-Rail]
6. B1: Overview on DAC related projects	<b>information</b> [EU-Rail]
7. B1: General DAC Master Plan   evaluation for autumn 24	<b>information</b> [PM / EU-Rail]
8. B2: Communication/dissemination 2024   <b>InnoTrans review</b>	<b>information</b> [PM / EU-Rail]
9. B2: Stakeholder management   meeting with VORDAC 21/10/24	<b>information</b> [EC]
<b>FP5-TRANS4M-R/FDFTO</b>	
10. D5.1-5.5 etc. Final Coupler Specification (update)	<b>information</b> [FP5]
11. ERA and NSA   state of play authorisation	<b>information</b> [FP5]
<b>System Pillar (Task 4)</b>	
12. ---	<b>information</b> [SP Task 4]
13. AOB and closing	[All]

Figure 28. EDDP Supervisory Board agenda 14/10/2024



## SB Agenda



- |                                                                          |                                         |                |
|--------------------------------------------------------------------------|-----------------------------------------|----------------|
| 1. Introduction, Welcome, adoption of the Agenda                         |                                         | [EU-Rail / EC] |
| 2. Review of actions since the last PB                                   |                                         | [EU-Rail / PM] |
| <b>EDDP and migration roadmap</b>                                        |                                         |                |
| 3. B1: EDDP/FP5/SPT4 Risk Management Workshop – state of play            | <i>point type</i><br><b>information</b> | [PM]           |
| 4. B1: General DAC Master Plan - possible impact                         | <b>decision</b>                         | [PM / EU-Rail] |
| 5. C1-C2: Summary of the exchange in the 26/11/24 PB                     | <b>information</b>                      | [PM / DACFIT]  |
| 6. C1: migration roadmap   Geographical scope of migration/vehicle fleet | <b>decision</b>                         | [PM / DACFIT]  |
| <b>FP5-TRANS4M-R/FDFTO</b>                                               |                                         |                |
| 7. FP5-TRANS4M-R: Status and Overview SB 2024                            | <b>information</b>                      | [FP5]          |
| <b>System Pillar (Task 4)</b>                                            |                                         |                |
| 8. Operational Rulebook - State of Play                                  | <b>information</b>                      | [SP Task 4]    |
| 9. AOB and closing                                                       |                                         | [All]          |
| - PB / SB dates 2025                                                     |                                         |                |
| - Draft EDDP Work Programme 2025                                         |                                         |                |
| - EU-Rail Call for Tender “engineering solutions for DAC”                |                                         |                |

Figure 29. EDDP Supervisory Board agenda 03/12/2024



## SB Agenda



- |                                                                 |                                         |                 |
|-----------------------------------------------------------------|-----------------------------------------|-----------------|
| 1. Introduction, Welcome, adoption of the Agenda                |                                         | [EU-Rail / EC]  |
| 2. Review of actions since the last PB                          |                                         | [EU-Rail / PM]  |
| <b>EDDP and migration roadmap</b>                               |                                         |                 |
| 3. B1: DAC FDFTO Risk Management Workshop   state of play       | <i>point type</i><br><b>information</b> | [PM]            |
| 4. Summary of the exchange in the 11/03/25 PB                   | <b>information</b>                      | [PM]            |
| 5. C: Development of migration scenarios                        | <b>information</b>                      | [PM]            |
| 6. C: Overarching DAC requirements management                   | <b>decision</b>                         | [PM/EU-Rail]    |
| 7. B2: Stakeholder management   DAC Fora + NCPs – State of play | <b>information &amp; action</b>         | [PM]            |
| <b>FP5-TRANS4M-R/FDFTO</b>                                      |                                         |                 |
| 8. FP5-TRANS4M-R   state of play                                | <b>information</b>                      | [FP5]           |
| 9. Manual uncoupling version for PDTs and migration             | <b>decision</b>                         | [FP5]           |
| 10. FA5 WS – Definition of future waves for projects            | <b>information</b>                      | [EU-RAIL]       |
| <b>System Pillar (Task 4)</b>                                   |                                         |                 |
| 11. State of Play                                               | <b>information</b>                      | [EU-RAIL]       |
| 12. AOB and closing                                             |                                         | [All / EU-RAIL] |

Figure 30. EDDP Supervisory Board agenda 21/03/2025