Politische und regulatorische Themen auf europäischer Ebene

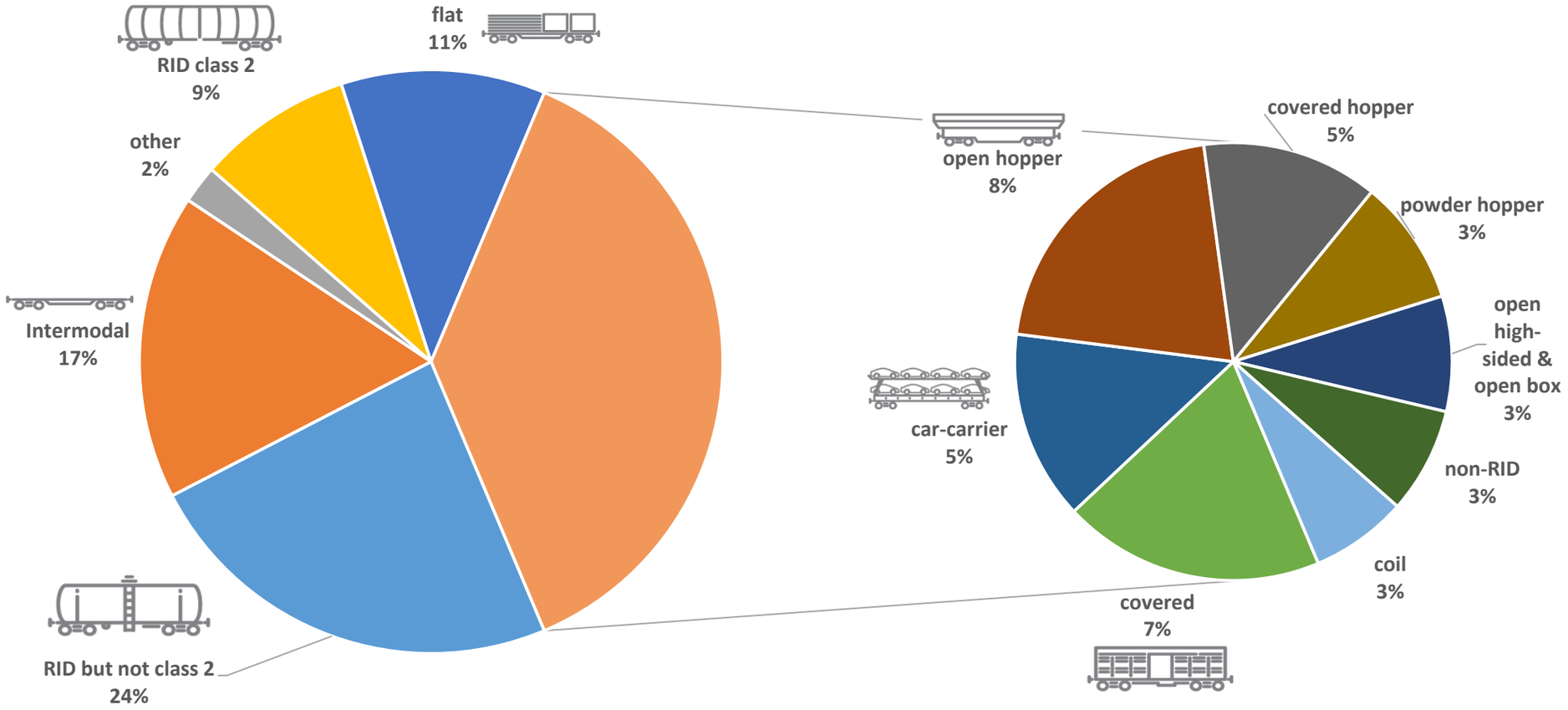
VPI Generalversammlung, 12/04/2023

Gilles Peterhans

UIP – INTERNATIONAL UNION OF WAGON KEEPERS

COMPOSITION OF WAGON FLEET

A 234’000 rail freight wagons fleet:



DER WEG ZU 30% - EINE NOTWENDIGE TRANSFORMATION

DIE SCHIENE ALS RÜCKGRAT DES GÜTERVERKEHRS – GANZHEITLICHE BETRACHTUNG

Häfen

- Das Tor zur Welt

Modulare Systeme

- Anpassungsfähigkeit

Digitale Platform

- Neue Zusammenarbeit

Intelligente Infrastruktur

- Stellwerk in die Cloud

Konsequente Raumplanung

- Laden – Entladen - Umladen

Integriert in die City-Logistik

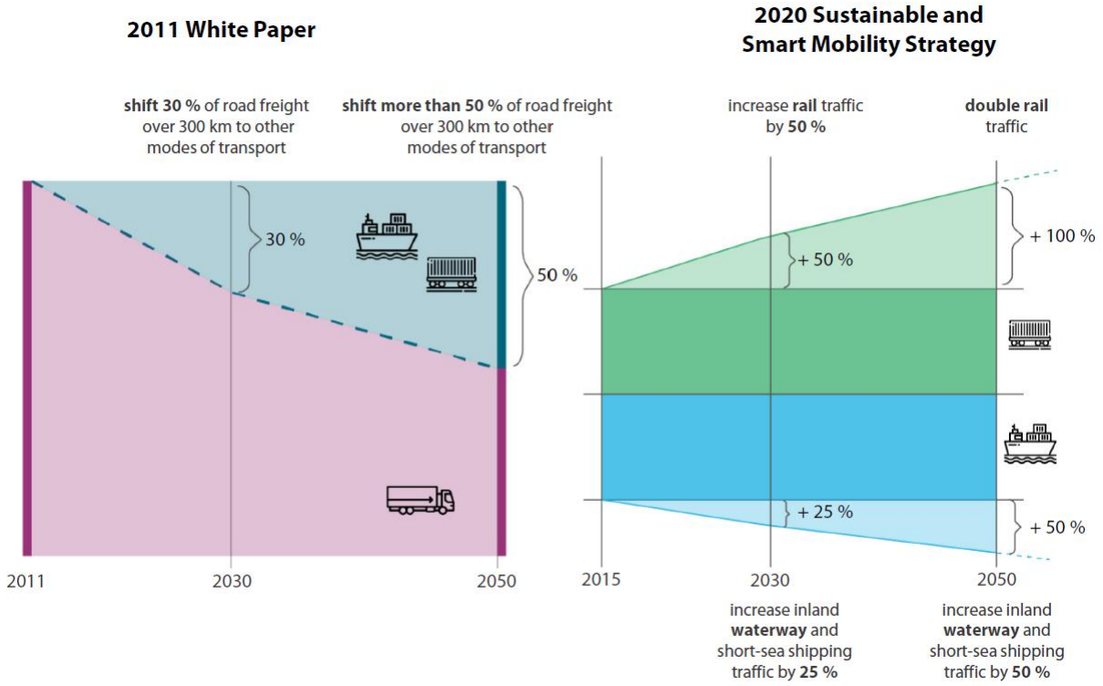
- Kombiniert und multimodal

Digitalvernetzt im Zugsverband

- Full Digital Freight Train Operation - **FDFTO**

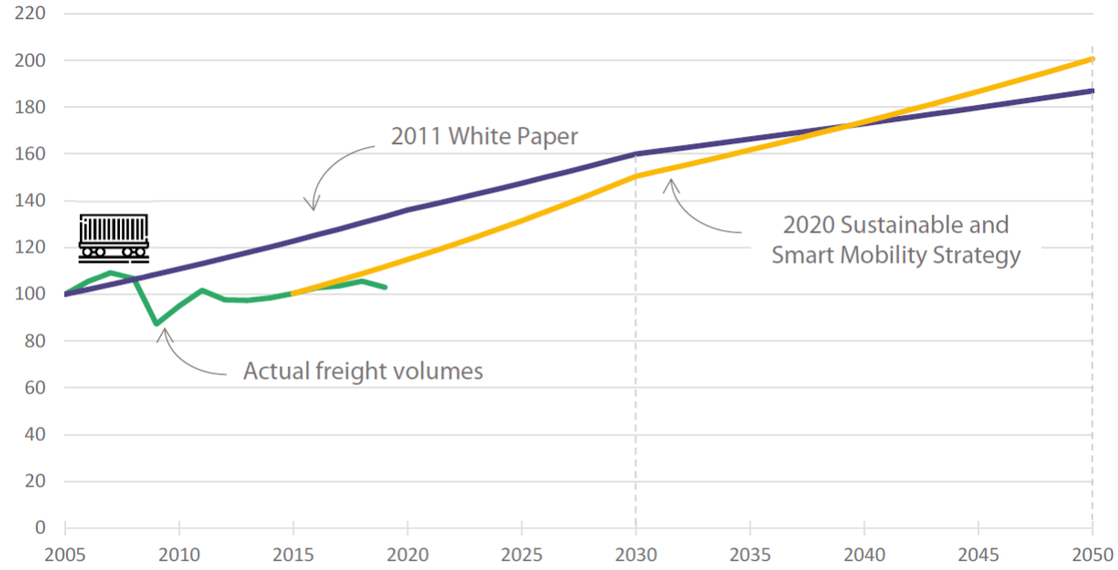
EUROPÄISCHER RECHNUNGSHOF: INTERMODAL

NOCH WEIT DAVON ENTFERNT, GÜTERVERKEHR VON DER STRAßE ZU HOLEN



Source: ECA.

- Weißbuch 2011: +60% für die Periode 2005-2030 und +87 % für die Periode 2005-2050
- Strategie 2020: niedrigere Mengenziele für 2030 und höhere Ziele für 2050

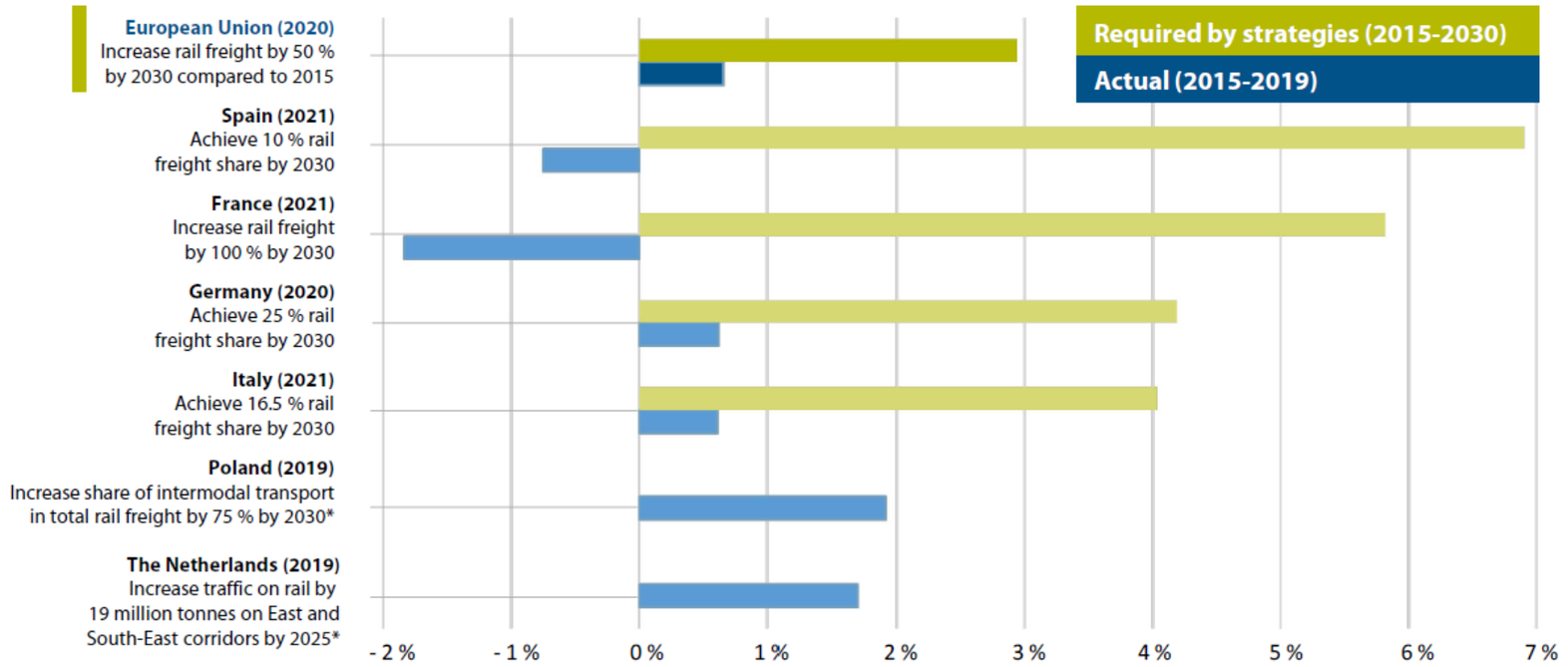


Source: ECA, based on Commission estimates and data from the EU Statistical Pocketbook.

- Weißbuch 2011: Züge mit einer Länge von 1.500m…
- Strategie 2020: 100mrd€/Jahr Investitionslücke muss geschlossen werden

EUROPÄISCHER RECHNUNGSHOF: INTERMODAL

EINHEITLICHER EUROPÄISCHER EISENBAHNRAUM: NICHT MAL BEI STRATEGIE



Note: * The strategy formulation does not allow a required growth rate to be derived for the entire rail freight market.

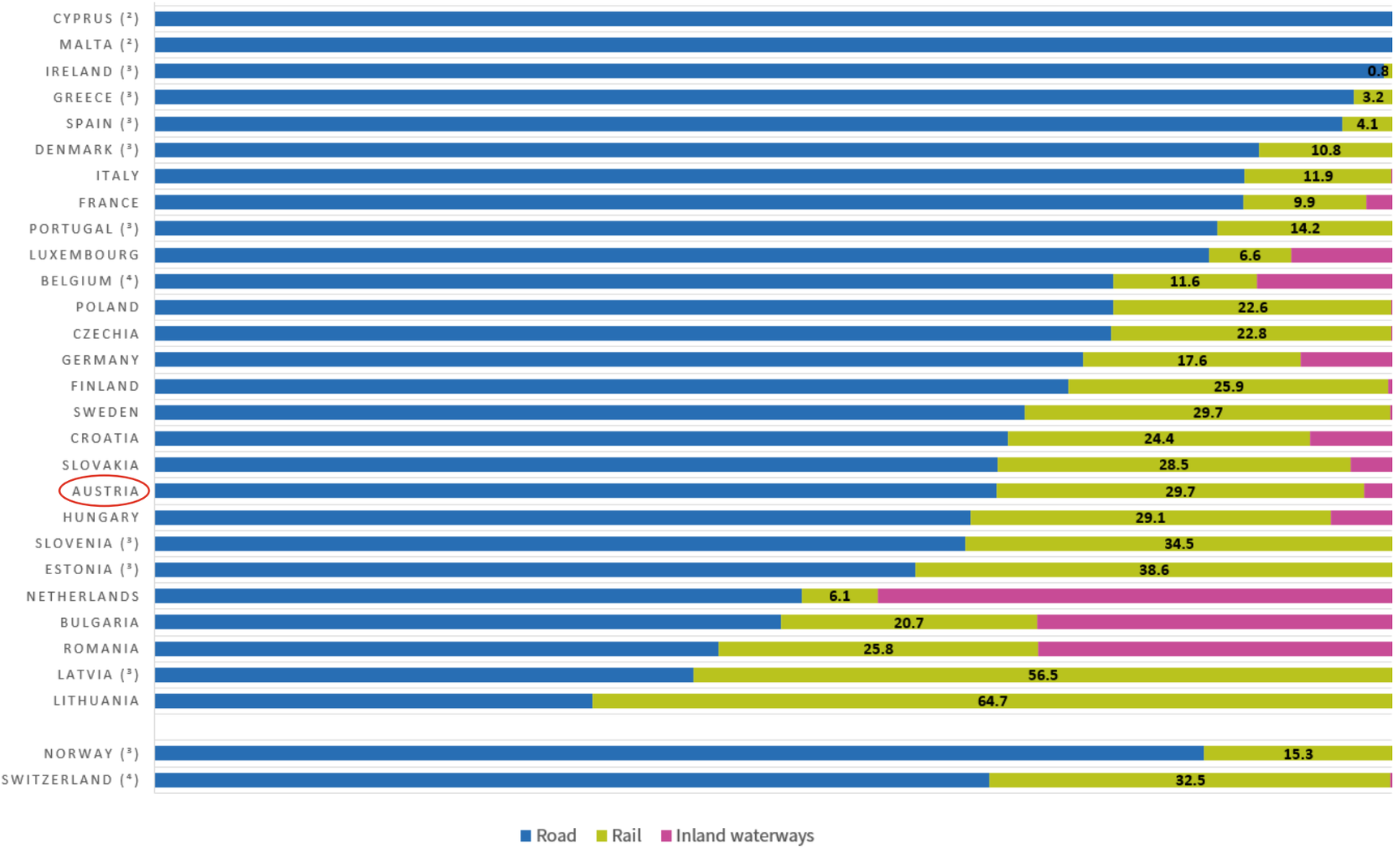
Source: ECA, based on analysis of EU and national strategies.

Immer noch sehr national:

- Ziele werden aufgrund nationaler Analysen und politischer Überlegungen gesetzt
- Pläne erscheinen zeitlich versetzt
- Massnahmen sehr breit gestellt: finanzielle, betriebliche oder ordnungspolitische
- Schwierieg und langwierige Koordination für die Umsetzung
-

GÜTERVERKEHR IN DER EU-27

MODALSPLIT IM BINNENTRANSPORT: % GESAMTEN AUFKOMMENS IN TONNENKILOMETER



Source: Eurostat, November 2022 (actual)

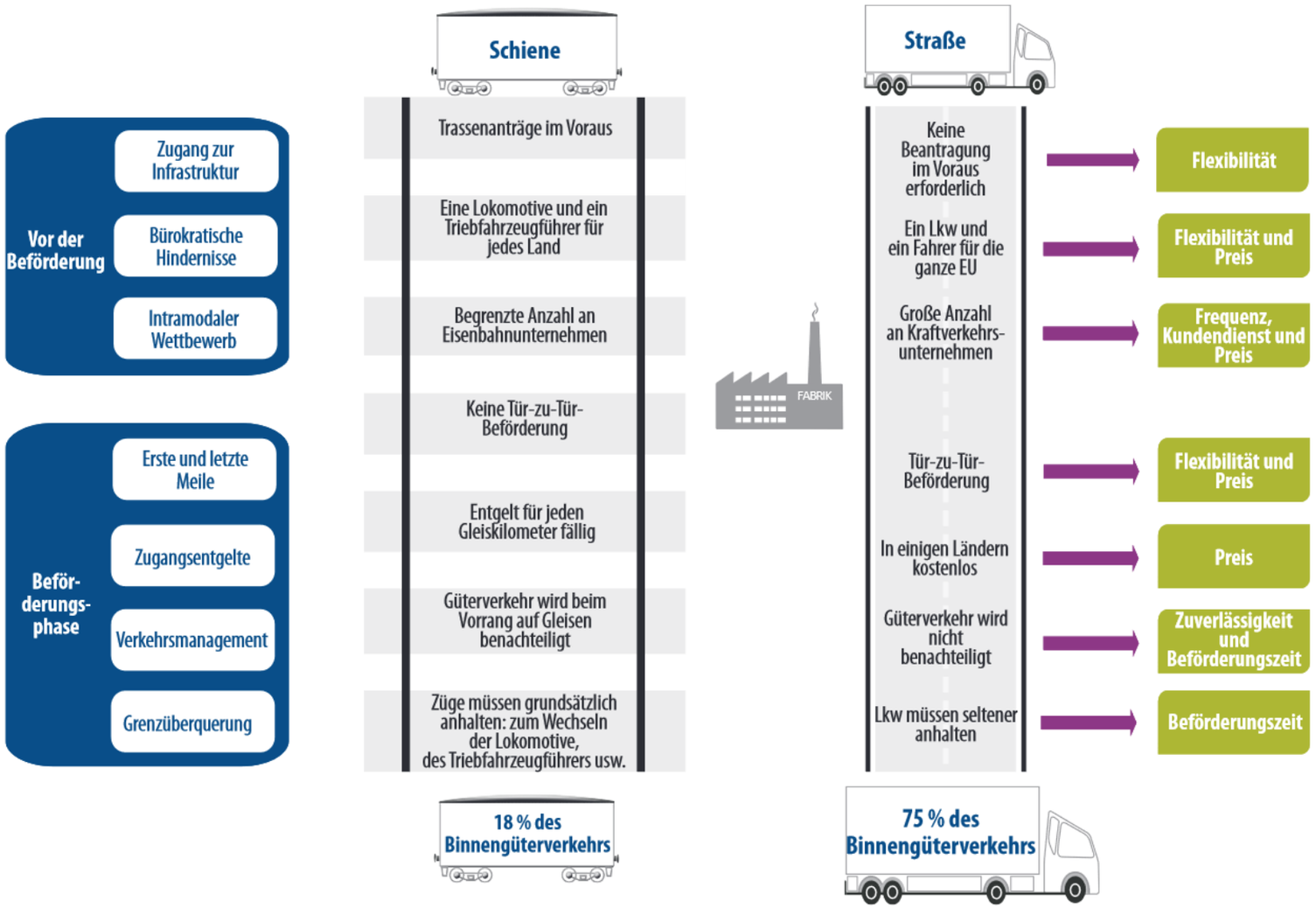
eurostat

Immer noch sehr national:

- Industrie- und Umweltpolitik
- Unterschiede der nationalen Systeme (technisch & betrieblich)
- Abhängigkeit von Produkten und Märkte
- Verkehrsmenge und Netzdichte
- Intramodaler Wettbewerb (P – G)
- Strategie und finanzielle Situation der marktbeherrschenden Betreibern
- Nationale Arbeitszeitgesetze,

HERAUSFORDERUNGEN DES SCHIENENGÜTERVERKEHRS

VERGLEICH MIT DER STRASSE : 2016 (EU RECHNUNGSHOF)



Quelle: Europäischer Rechnungshof.

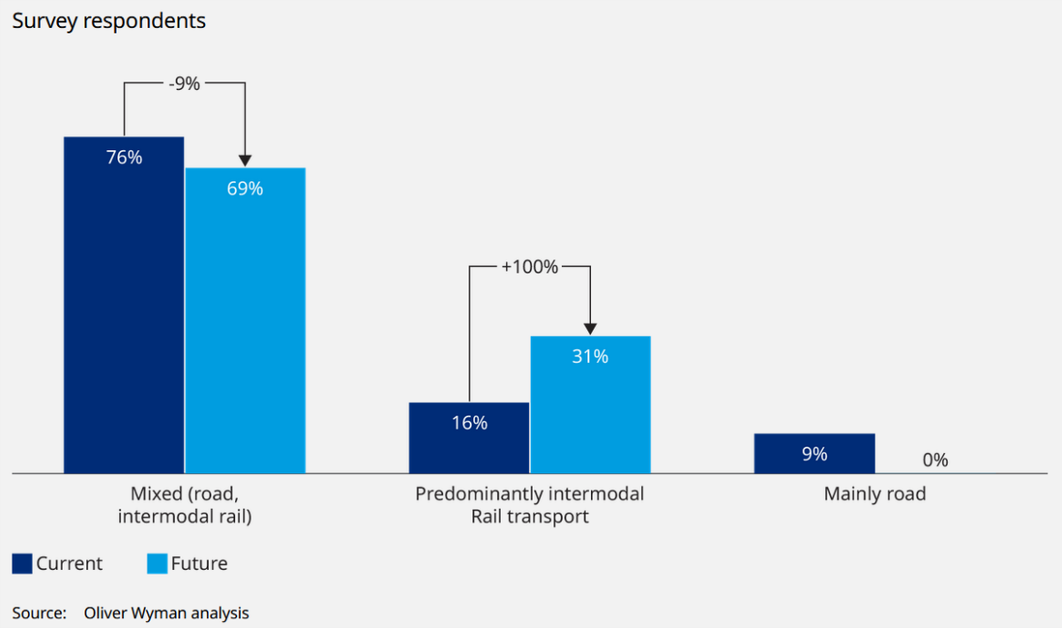
Entscheidungskriterien für die Wahl des Verkehrsträgers :

- Tür-zu-Tür Angebot
- Gesicherter, langfristiger Zugang zu Kapazitäten
- Flexibilität
- Vorlaufzeit
- Digitales Frontend & Integration
- Track & Trace
- Management von Zwischenfällen
- Preis
- O/D-Netzwerk

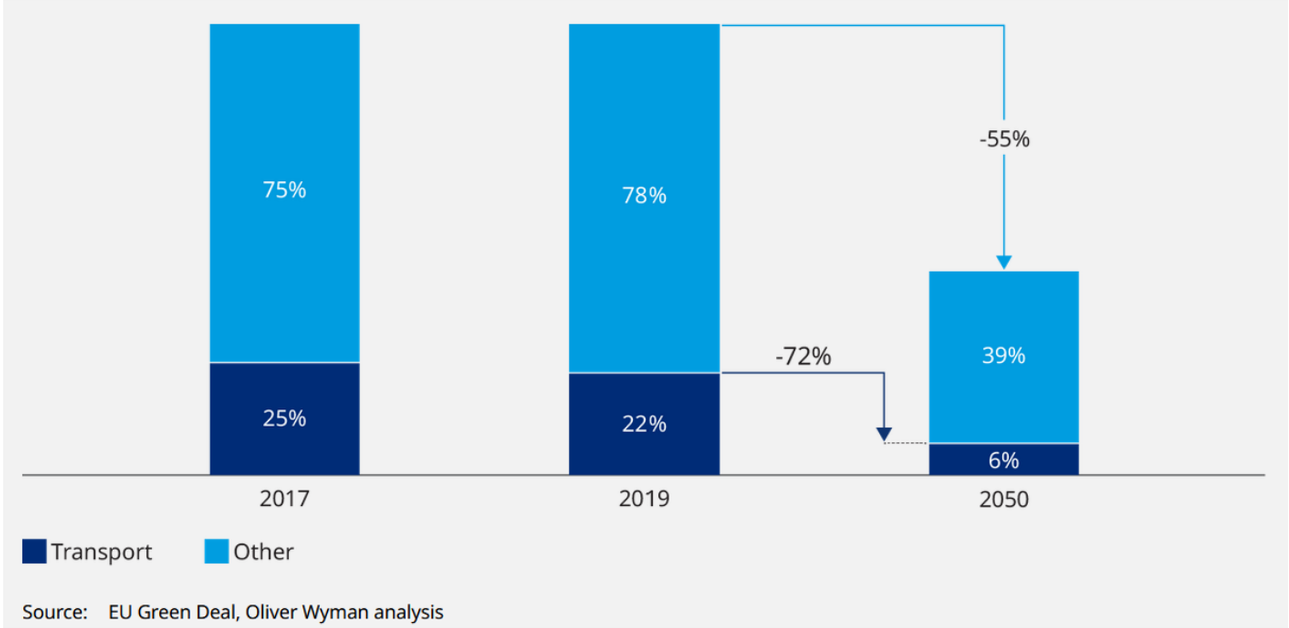
Quelle: Oliver Wyman, Befragung

DIE CHANCEN DES SCHIENENGÜTERVERKEHRS

40 UNTERNEHMEN AUS FERTIGUNG/HANDEL/VERKEHR



Markt: möglicher zukünftiger Verkehrsmix



Politik: geplante Reduktion CO2 Emissionen im Rahmen des Europäischen Green Deal

YOU MAY BE DISAPPOINTED IF YOU FAIL BUT YOU ARE DOOMED IF YOU DON'T TRY

Beverly Sills, American Operatic Soprano (1929 – 2007)

INTERMODALER GÜTERVERKEHR

GREENING TRANSPORT PACKAGE: ERWARTUNGEN BEI DER REVISION KV-RICHTLINIE

- **Current CT directive**
  - ✓ Outdated
  - ✓ Narrow scope
  - ✓ Ineffective support instruments
  - ✓ Heavily reliant on State aid

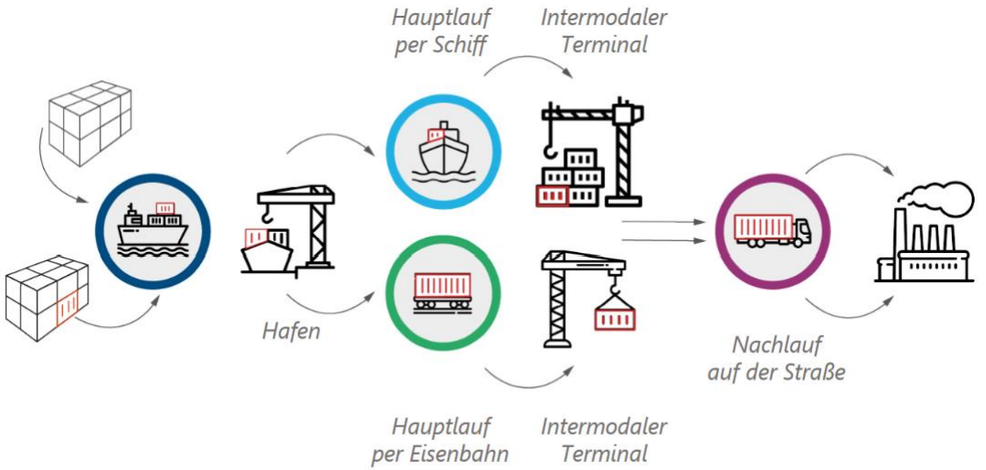
Proposal by EC (expected in June 2023):

- **Enlarged scope**
  - ✓ Intermodal (semi-trailers and vehicle combinations considered as ILUs)
  - ✓ Domestic + international traffic

- Eligibility for financial support
  - ✓ 40% external costs savings compared to road-only

- Mandatory use of **eFTI** (i.e., electronic consignment note)
  - ✓ Calculation of eligibility + enforcement

- **Regulatory benefit**
  - ✓ Exemption from traffic bans



Quelle: Europäischer Rechnungshof.

FORSCHUNG UND ENTWICKLUNG AUF EU EBENE

EUROPE'S RAIL JOINT UNDERTAKING: EIN TRAGENDER PFEILER

Europe's Rail

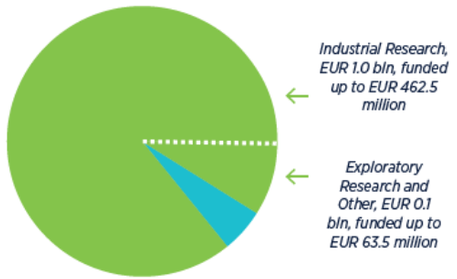
European Rail Traffic Management and Digital Enablers | Competitive Digital Green Rail Freight | Digital & Automated up to Autonomous Train Operators | Smart Solutions for Low Density Traffic Lines | Sustainable and Digital Assets

Innvoation Pillar	2021 – 2031 (in EUR million)	Multi Annual Call 2022 (in EUR million)
Flagship Area 1: Network management planning and control & Mobility Management in a multimodal environment & Transversal Topics: Digital Enablers	173.7	87.4
Flagship Area 2: Digital & Automated up to Autonomous Train Operations	251.9	121.5
Flagship Area 3: Intelligent & Integrated asset management	217.4	104.2
Flagship Area 4: A sustainable and green rail system	169.2	89.7
Flagship Area 5: Sustainable Competitive Digital Green Rail Freight Services	136.3	95.5
Flagship Area 6: Regional rail services / Innovative rail services to revitalise capillary lines	82.3	37.7
Flagship Area 7: Innovation on new approaches for guided transport modes	15.7	7.3
Total	1046,5	543,3

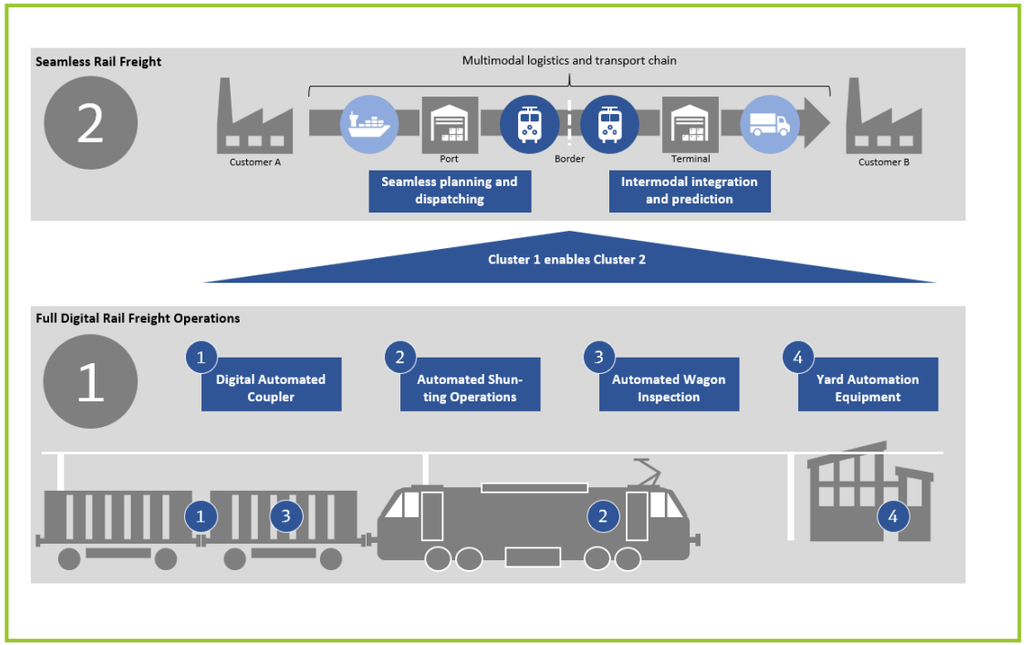
Budget

The total value of the Programme is estimated at EUR 1.2 bln:

- **System Pillar: EUR 58.8 million, funded up to EUR 50.0 million**
- **Innovation Pillar: EUR 1.1 bln**



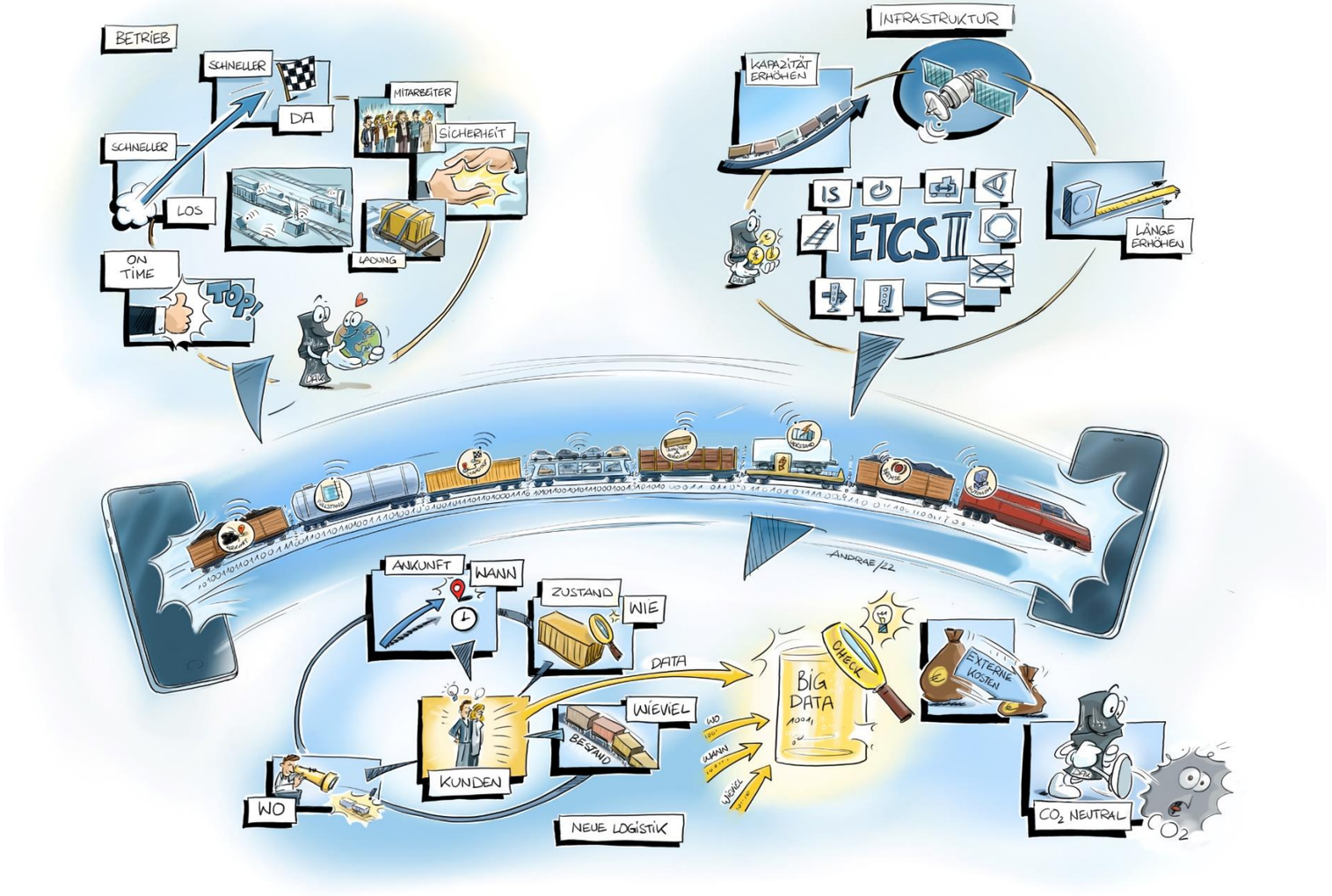
TRANS4M-R



- Ein Konsortium mit 71 Partnern
- Ausgewogenes Verhältnis zwischen Hersteller, Eisenbahnverkehrsunternehmen - Betreiber und Wagenhalter, KMU, Hochschulen und Forschung

DIE ZUKUNFT IST DIGITAL

DIGITAL **A**UTOMATED **C**ONNECTED: VORTEILE IM SYSTEM UND FÜR DIE GESELLSCHAFT



Betrieb

- “Schneller”
- Sicherer
- Länger/Schwerer

Infrastructure

- ATO über ETCS
- Mehr Kapazität
- Weniger bauen

Assets

- Zustandbasiert
- Attraktiv
- Erhöhte Verfügbarkeit

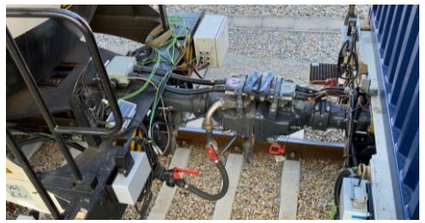
Kunden

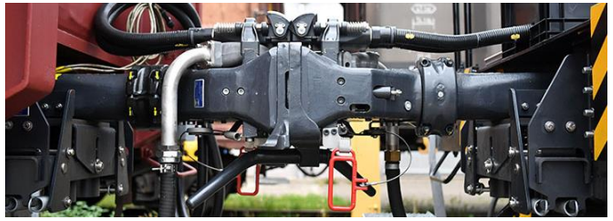
- Zuverlässige Transporte, schnell, real-time
- Effizientes Ladungsverkehrsystem bereit für Verlagerung
- Vollintegriert in die supply chain

DIGITAL AUTOMATIC COUPLER PROJECT

DERZEITIGE BETEILIGUNG DER WAGENHALTER

Voraussetzung zur Einführung DAK





EIN europäisches DAK-System

Erprobte Technik

Erprobte operative Funktionalität

Europe's Rail

Europe's Rail JU Innovation Pillar

Flagship Project 5: TRANS4M-R DAC / „Full Digital Freight Train Operations"

Technologie, Tests, Demos, Spezifikationen, Grundsätze für Zulassung (2022-2026)

Europe's Rail JU System Pillar

Standardisierung vorantreiben Vorbereitung der TSI Revisionen für DAK Technologie und Betrieb (2022-2026)

Bereitstellung angemessener Förderung

Überschaubare Zulassung

Tragfähiger Migrationsplan

DAC migration EDDP „NEO"

Flottenanalysen & Upgrade Engineering

Anpassungen Infrastruktur & IT

Inbetriebnahmekonzept (Sicherheit, Personal-training, Regelwerke etc.)

Kapazitätsplanung für Upgrade (Werkstätten, Arbeitskräfte, Komponenten)

Upgradeplanung (Analyse der Gleisanschlüsse & Betriebsabläufe)

Förderungs- & Finanzierungskonzept

Kosten-/Nutzenanalyse (Aktualisierungen)

Investitionsplan & Rahmenkonzept Einkauf

Weitere regulatorische & rechtliche Rahmenkonzepte

EUROPEAN UNION AGENCY FOR RAILWAYS

Entwicklung effizienter & massgeschneiderter Zulassungsprozess & -anforderungen

TSI Revision

DIGITAL AUTOMATIC COUPLER PROJECT

AKTUELLER ARBEITSSTAND

DAK & EDDP: eine starke Sektorinitative	• EDDP Beteiligung auf fast 90 aktiv teilnehmende Unternehmen aus ganz Europa erhöht • ER JU FP5 Projekt gestartet mit 27 Begünstigten / 71 Partnern • Verbreitungsaktivitäten insb. in Richtung SEE/CEE intensiviert
DAK Standardisierung und technische Entwicklung schreitet voran	• Scharfenberg Design als EU-Standard ausgewählt • Aufnahme der DAK in den „Technical Report“ der TSI-Revision 2022 • Spezifikationen für DAK (mechanisch/pneumatisch) weit fortgeschritten • Spezifikationen für DAK (Daten/Energie) werden schnellstmöglich fertiggestellt
Neue, harmonisierte betriebliche Zielprozesse in Bearbeitung	• Betriebliche Zielprozesse nahezu bereit für erste Anwendungsfälle (Rangieren, Zugbildung, Zuglauf), erstmals EU-weite Harmonisierung • Operative DAK-Tests fanden statt (ermöglicht durch DAC4EU) und werden fortgesetzt
DAK Migration	• Entwicklung solider und realisierbarer Migrationsszenarien • Analyse der Auswirkungen auf die Arbeitnehmer (Sicherheit der Arbeitnehmer, neue Berufsprofile / Fähigkeiten)
DAK Förderung und Finanzierung	• Erste Version der Kosten-Nutzen-Analyse ist fertig; es folgen jetzt Verfeinerungen abhängig von den jeweiligen Stakeholdern • Studie für Europäischen Investitionsplan erstellt, Detailarbeit folgt darauf aufbauend

DIGITAL AUTOMATIC COUPLER PROJECT

SCHRITTE UM BEI DEN WICHTIGSTEN THEMEN VORANZUKOMMEN

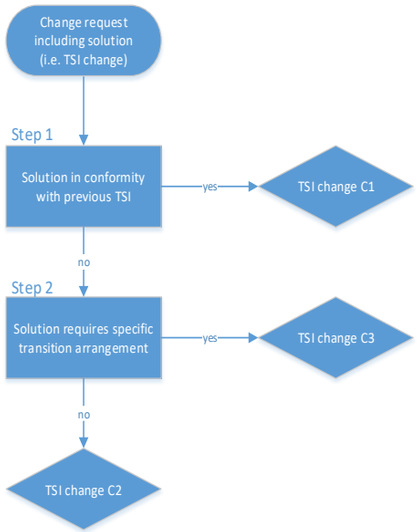
Die Herausforderungen für Aufrüstung der bestehenden Flotte

- **Erreichung weitgehender Akzeptanz bei allen Sektorbeteiligten, Kunden europaweit**
  - **Ressourcenfindung zur Einführung des Migrationsfahrplans**
- **Ermittlung des technischen Upgrade-Aufwands für eine heterogene europäische Waggon- und Lokomotivflotte**
  - **Finalisierung der technischen Spezifikation**
    - **Ermittlung Kosten für**
      - **Material**
      - **Upgradeaufwand**
      - **Instandhaltung**
- **Erreichung der Akzeptanz für umfassende Förderung durch EU / Mitgliedsstaaten**
  - **Finalisierung der politischen Storyline**
    - **Ermittlung des gesamten Finanzierungsbedarfs**

TSI “MEGAPACK” – VOTED AT RISC98 – 30/03/2023

STRAFFUNG DER ÜBERGANGSBESTIMMUNGEN

TSI WAG
EU 321/2013
Appendix A



- **C1:** clause or requirement for which the conformity with the previous version of that TSI ensures in all cases the conformity with the new version.
- **C2:** clause or requirement for which the conformity with the previous version of that TSI does not lead to a conformity with the new version.
- **C3**: clause or requirement for which the conformity with the previous version of that TSI does not ensure the conformity with the new version and for which a specific transition period is defined in order to promote a swift implementation.

APPENDIX A - CHANGES OF REQUIREMENTS AND TRANSITION REGIMES

Changes with a generic transition regime:

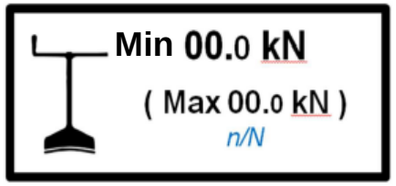
For TSI clauses listed in table 1, compliance with the previous TSI does not systematically imply compliance with this TSI. However, for projects already in design phase when this TSI enters into force, the requirement of the previous TSI can still apply for a duration of 7 years from the entry into force of this TSI. Projects in production phase and units in operation are not affected by the TSI requirements listed in table A.1

Table A.1 – transition regime of 7 years

TSI clause(s)	TSI clause(s) in previous TSI	Explanation of the TSI change
4.2.2.3 Second paragraph	New requirement	Inclusion of a requirement on the securing devices
4.2.3.5.3 Derailment detection and prevention function	No clause	Inclusion of requirements for the derailment detection and prevention function
4.2.4.3.2.1 Service brake	4.2.4.3.2.1 Service brake	Evolution of the specification referenced in Appendix A, indexes [16] and [17]
4.2.4.3.2.2 Parking brake	4.2.4.3.2.2 Parking brake	Evolution of the specification referenced in Appendix A index [17]
4.2.4.3.2.2 Parking brake	4.2.4.3.2.2 Parking brake	Change in the calculation of the parking brake parameters
6.2.2.8.1 Testing of barriers	6.2.2.8.1 Testing of barriers	Evolution of the specification referenced in Appendix A index [19]
7.1.2 (h) Marking of the parking brake	7.1.2 (h) Marking of the parking brake	Change in the required marking

TSI “MEGAPACK” – VOTED AT RISC98 – 30/03/2023

BERECHNUNG UND KENNZEICHNUNG FÜR DIE FESTSTELLBREMSE



Problem:

- **WAG TSI**: “Minimum parking brake force” shall be calculated
  - Without further description what is meant by “minimum”
  - TSI refers to the whole chapter 6 of EN 14531-6 (withdrawn) with several calculations without further definitions of the subclause and the considered mass (empty, semi-loaded, loaded)
  - No link between marking in chapter 7.1.2 to definition in chapter 4.2.4.3.2.2
- For **existing wagons**, UIC Leaflet 545 “Brakes – Inscription, marks and signs”: braking force in [kn], but no reference to UIC Leaflet 544-1 “Brakes – Braking performance”

- The calculation of the brake force, which depends on the adhesion between wheel and rail, is based on the axle load but the existing framework gives room for interpretation…
- This leads to the situation, that some wagons have the same marking but with values calculated in different ways.

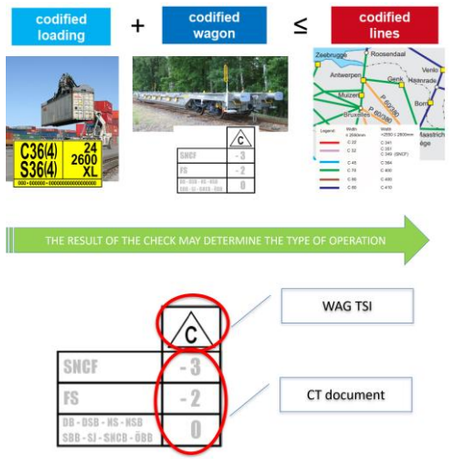
> holding force **for tara weight**, taking into account the wheel/rail adhesion

> holding force without taking into account the wheel/rail adhesion **nor the load condition**

- Introduce calculation of the maximum (capability of parking brake system) and minimum (tara-conditions and 0,12 wheel/rail adhesion) parking brake holding forces

TSI “MEGAPACK” – VOTED AT RISC98 – 30/03/2023

ANPASSUNG DER TSI, UM DEN INTERMODALEN GÜTERVERKEHR ZU ERLEICHTERN



Problem:

- The process and methodology for the **attribution of a wagon compatibility code to freight wagons** for combined transport and different from one MS to another. A task of the Agency is to harmonise those processes and methodologies.
- In all cases, **only freight wagons** compliant to certain clauses of standards **UIC IRS 50571-4: 2021 and 50571-5:2011** may be attributed a wagon compatibility code (WCC) according to IRS UIC 50596-6:2021. Unfortunately, there isn’t a common approach on the assessment of the conformity of freight wagons to those standards.

- ***4.2.3.1 Gauging**: (new) “Units intended to be used for combined transport shall be codified according to **the requirements of Appendix H**.”*

Table 1 : Compatibility code allocation

Wagon compatibility code	ILU in combined transport	Carrier wagon suitable for combined transport
P	Semi-trailers as per *IRS 50596-5*	Recess wagons[1] with seating device and compliant with the reference recess wagon envelope as well as the application criteria and limit curve of point A.3.
P + envelope compatibility code	Semi-trailers in accordance with *IRS 50596-5*	Recess wagons in accordance with *UIC Leaflet 571-4* fitted with a seating device and with an envelope listed in *IRS 50596-5*
N	Semi-trailers as per *IRS 50596-5*	Recess wagons compliant with the reference recess wagon envelope as well as the application criteria and limit curve of Appendix A (also *IRS 50571-4*).
C	Swap bodies as per *UIC Leaflet 592* and ISO containers with a width of 2 438 mm as per *ISO 668*	Carrier wagons and recess wagons[3] in accordance with *IRS 50571-4*
ISO	ISO containers with a width of 2 438 mm as per ISO 668	Carrier wagons in accordance with *IRS 50571-4* [3]
B depending on the compatibility level	Roller units depending on the compatibility level (see *UIC Leaflet 591*)	Type 1[2] carrier wagons depending on the compatibility level [Sccns(s)]
K, R, T	Semi-trailers of systems specified in *UIC Leaflet 597*	Bogies of systems in *UIC Leaflet 597* with or without adaptors

1. Compatibility code (P) has been used for recess wagons with a dual-height seating device (98 cm and 113 cm) as per IRS 50571-4, which are now included in IRS 50596-5. It should no longer be used on wagons and should be replaced by P + envelope compatibility code.
2. And bogie carrier wagons complying with the application criteria and the limit curve as per point A 1 as well as 2-axle carrier wagons complying with the application criteria and the limit curve as per point A 2.
3. A wagon marked ISO may not be marked C, in other words it is authorised only for the carriage of ISO containers of width 2438 mm.

- *New Appendix H: Codification of Units intended to be used in Combined Transport*

> **H.1 Wagon Compatibility Code (WCC)**: “*The WCC shall be determined for all units and assessed by a Notified Body*”

> **H.2 Wagon Correction Digit (WCD)** *: “The Wagon Correction Digit (WCD) is the result of a comparison between the geometric characteristics of the unit under assessment and the characteristics of the reference wagons defined in point H.3”* **=>** *“The result of the assessment shall be included in the report of the Notified Body.”*

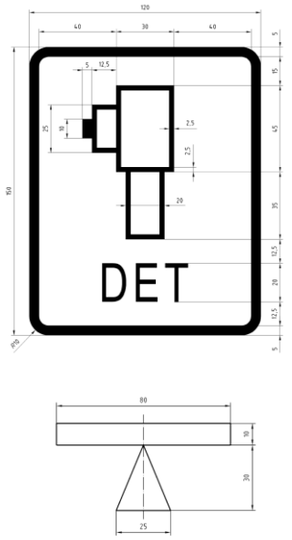
TSI “MEGAPACK” – VOTED AT RISC98 – 30/03/2023

NEUER ANHANG D: INDEXIERTE TABELLE ALLER ZITIERTEN NORMEN MIT REFERENZEN

APPENDIX D

MANDATORY STANDARDS OR NORMATIVE DOCUMENTS REFERRED TO IN THIS TSI

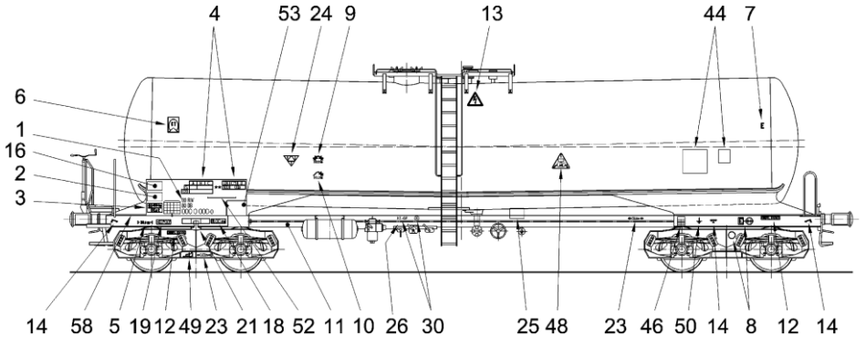
Index	Standard name	Standard reference	Standard version
	Parameter	TSI Clause	Standard Clause
[1]	**Railway applications - Structural requirements of railway vehicle bodies - Part 2: Freight wagons**	**EN 12663-2**	**2010**
[1.1]	Strength of unit	4.2.2.2	5
[1.2]	Strength of unit – demonstration of conformity	6.2.2.1	6, 7
[1.3]	Ability to be hump shunted	C.3	8
[1.4]	Classification	C.3	5.1
[1.5]	Requirements concerning the buffing tests	C.3	8.2.5.1
[2]	**Railway applications - Marking on railway vehicles - Part 1: Freight wagons**	**EN 15877-1**	**2012+A1:2018**
[2.1]	Lifting and jacking position marking	4.2.2.2	4.5.14
[2.2]	Marking of DDAF	4.2.3.5.3.4	4.5.59
[2.3]	Applicable markings	7.1.2 (g)	all clauses except 4.5.25(b)



Problem:

- To ensure a **clear referencing of the standard** clause(s) relevant to a basic parameter and to **facilitate future updates**, all detailed references should be in the dedicated appendix and not in the TSI core text.
- EN references in TSIs core text given via indexes, with added in bracket corresponding EN standard without its version, version which would be specified in the Appendix.

- *Revamped Appendix D: Mandatory Standards or normative documents referred to in this TSI*
- ***58** EN norms and UIC leaflets/IRS referenced in TSI WAG*
- *Strong involvement in works of CEN TC 256 (incl. WGs) necessary!*



[2]	**Railway applications - Marking on railway vehicles - Part 1: Freight wagons**	**EN 15877-1**	**2012+A1:2018**
[2.1]	Lifting and jacking position marking	4.2.2.2	4.5.14
[2.2]	Marking of DDAF	4.2.3.5.3.4	4.5.59
[2.3]	Applicable markings	7.1.2 (g)	all clauses except 4.5.25(b)

TSI “MEGAPACK” – VOTED AT RISC98 – 30/03/2023

BREMSSOHLE ALS INTEROPERABILITÄTSKOMPONENT (IC): AKUSTISCHE BEWERTUNG

	Bremssohle	NICOBB	LZarG
Feldversuch	EuropeTrain - IB116*	-0,5	-0,6
	EuropeTrain - C952-1	-1,7	-1,8
	EuropeTrain - Kombi	5,1	4,9
	EuropeTrain -GG	11,0	10,5
	LZarG - C810	-4,1	-3,8
Prüfstand	IB116* (H1)	0,4	0,6
	IB116* (O1)	-2,4	-2,3
	IB116* (H2)	0,1	0,1
	C810 (N)	-4,4	-4,3
	Grauguss (F)	12,4	11,8

Problem: After the last revision of the NOI TSI, a new open point has been created regarding the **acoustic assessment of the tread wagon brake blocks at IC level**. A methodology and, if possible, the pass/fail criteria for this assessment are required.

EUROPEAN RAILWAY AGENCY

Table 2.1: List of fully UIC approved composite brake blocks (K) for international transport

Position N°	Producer	Type	Approved configurations: Arrangement	Nom. wheel diameter [mm]	Max. speed empty [km/h]	Max. speed laden [km/h]	Min. dyn. appl. Force [kN]	Max. dyn. appl. Force [kN]	Min. axle load [t]	Max. axle load [t]	Approval period: from dd/mm/yy	to dd/mm/yy
1	CoFren	C810 (organic)	2xBg[2)]	920	120	120	2,5	19,0	3,6	22,5	15/10/03	30/06/23
2	CoFren	C810 (organic)	2xBgu[2)]	920	120	120	2,5	19,0	3,6	22,5	15/10/03	30/06/23
3	CoFren	C810 (organic)	1xBgu[1)]	920	120	120	5,0	38,0	3,6	22,5	01/03/11	28/02/21
4	CoFren	C333 (sintered)	1xBgu[1)]	920	120	120	5,0	38,0	3,6	22,5	01/07/11	30/06/21
5	Federal Mogul	J816M (organic)	2xBg[2)]	920	120	120	2,5	19,0	3,6	22,5	01/07/05	15/04/25
6	Federal Mogul	J816M (organic)	2xBgu[2)]	920	120	120	2,5	19,0	3,6	22,5	01/07/05	15/04/25
7	CoFren	C810 (organic)	2xBg	840	120	100	5,5	14,5	7,5	17,5	01/08/11	31/07/21
8	CoFren	C810 (organic)	2xBg	840	120	100	8,7	12,2	7,5	18,0	01/02/12	31/01/22
9	Federal Mogul	J816M (organic)	2xBg	840-730	120	100	5,5	14,5	7,5	17,5	01/07/12	30/06/22
10	Frenoplast	FR 513 (organic)	2xBg[1)]	920	120	120	2,5	19,0	3,6	22,5	01/07/12	30/06/22

- *New Appendix F: Assessment of acoustic performance of a brake block*
- *New Appendix G: Blocks exempted from an EC Declaration of conformity for a period of 10 years after the entry into force of this TSI.* ***≠ not Appendix G of TSI WAG***
- Appendix G of TSI WAG : List of composite Brake blocks exempted of a declaration of conformity as referred in Art. 8B (~~LIST OF FULLY APPROVED COMPOSITE BRAKE BLOCKS FOR INTERNATIONAL TRANSPORT)~~

> Need to keep an eye on **Approval Period** !!

> Need to keep an eye on brake block manufacturers…

DANKE FÜR IHRE AUFMERKSAMKEIT

Austria | Belgium | Czech Republic | France | Germany | UK | Hungary

Italy | Netherlands | Poland | Slovak Republic | Spain | Sweden | Switzerland

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