

Marco Polo Project DESTINY: Putting standards into practice - update

IRU Group of Experts on Intermodal Transport and Logistics GETIL
Brussels, March 5, 2014

Martin Burkhardt, Director General
International Union for Road-Rail combined transport



Outline of the project

- **Standardisation**

- great way to enhance the efficiency by a commonly agreed, homogeneous best practice.
- particularly true in intermodal transport which involves numerous actors.

- **Standards can only deliver their beneficial effects if they are applied and eventually become a part of daily best practice.**

- **DESTINY proposes to facilitate the deployment of existing standards related to:**

- **EN13044 (identification and codification of intermodal loading units)**
- **Safety (Cargo Securing)**
- **Dangerous Goods**

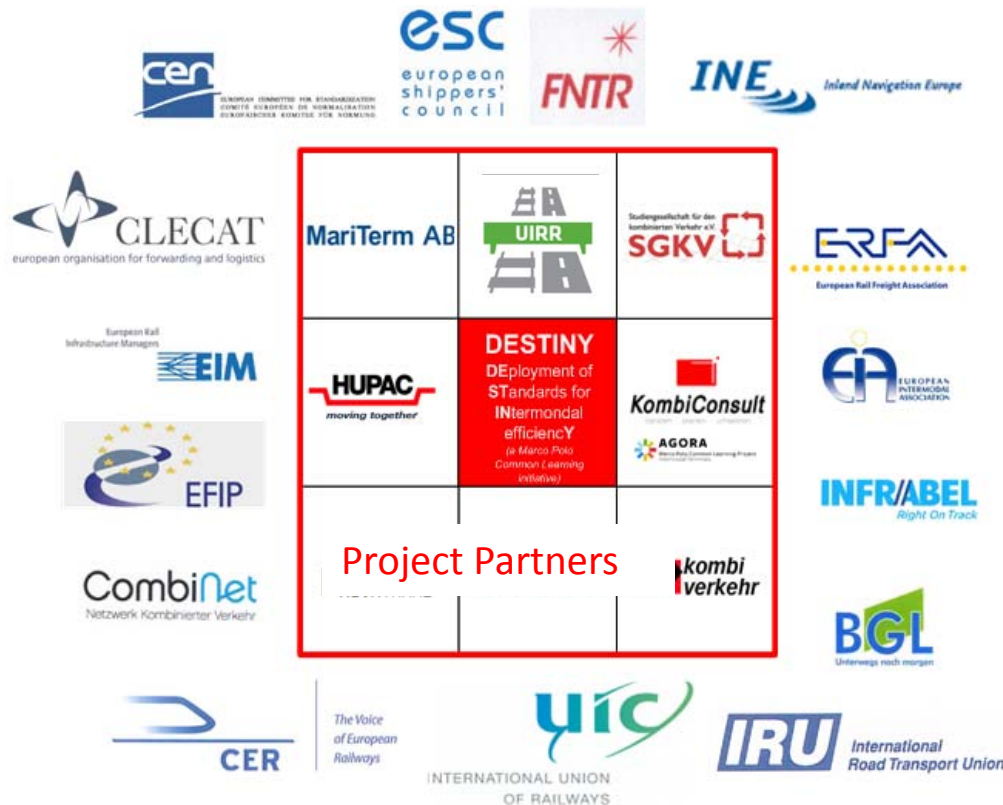
The consortium

- **Coordination** **UIRR scrI (Belgium)**

- **Action partners**
 - SGKV (main consultant)**
 - Hupac Intermodal BVBA (CT operator)**
 - KombiConsult (consultant specialised in CT)**
 - Kombiverkehr (CT operator)**
 - Mari Term (specialised in cargo securing)**
 - Novatrans (CT operator)**
 - Terminali Italia (Terminal Operator)**

- **Project duration** **24 months (Start: 1st September 2012)**

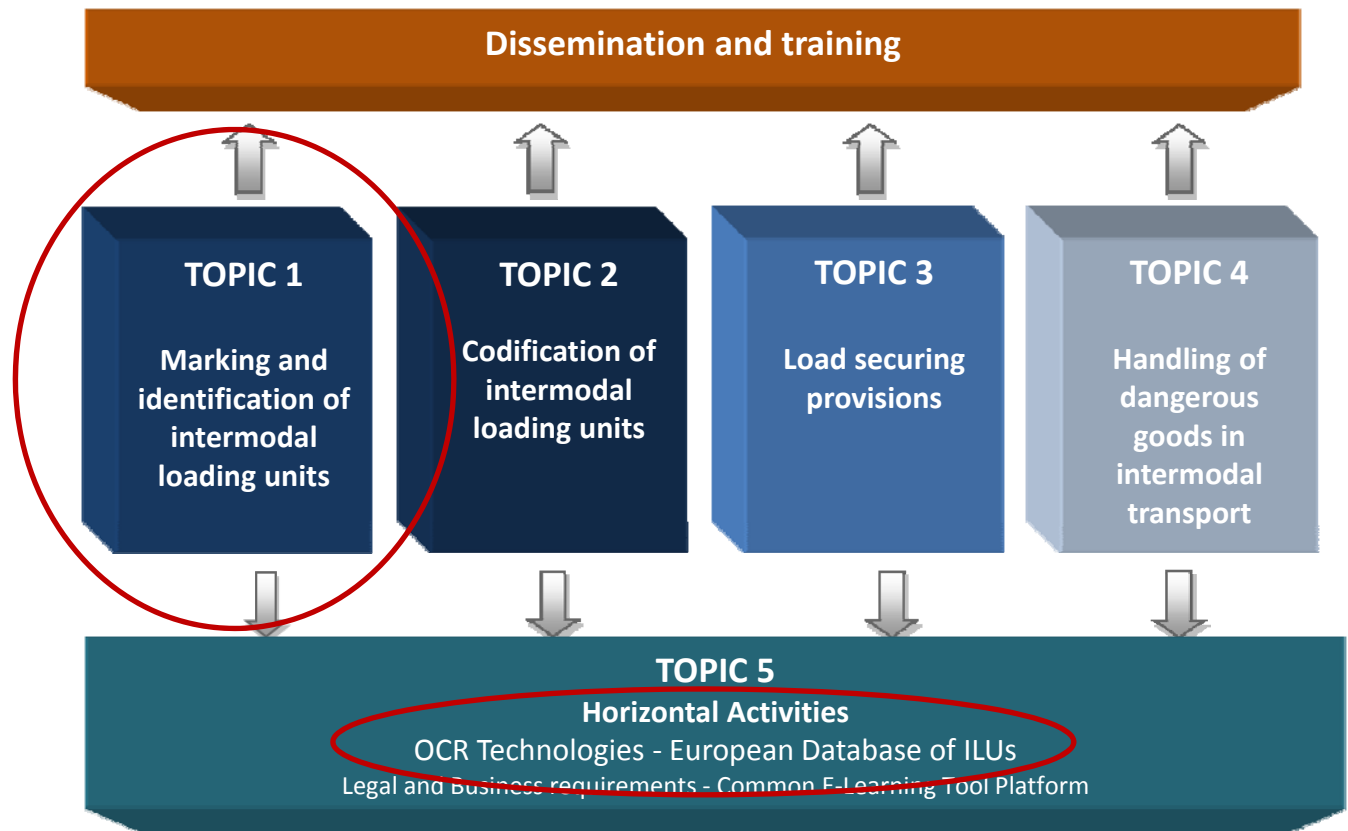
Unique dissemination network



15 Associations
 officially support
 DESTINY
 (more will join the network
 during project duration)

Topic structure

**Topic 1 and 5
related to
the ILU-Code**

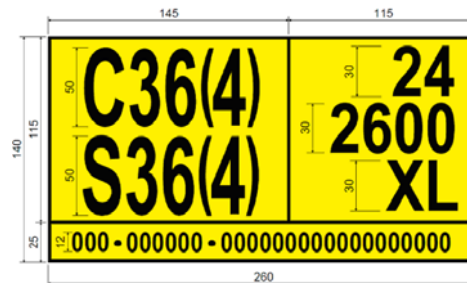


‘New system’ – Overall objective of EN 13044 (revision in 2010)

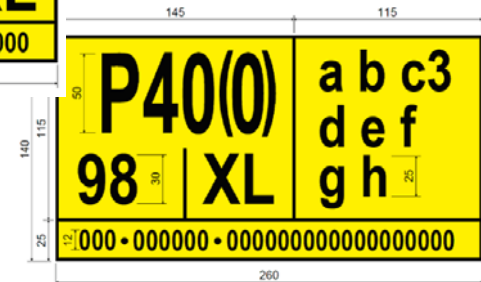
Simplification of the procedure: a clear separation of the owner-identification and of the technical characteristics of the loading unit

Owner-Key	Registration number	Check digit
ABC A	001234	2
Reserve an ILU-Code	Free choice by the owner	Calculate the check digit
www.ilu-code.eu		

Part 1 – ILU-Code



**Parts 2 & 3
Codification plates**



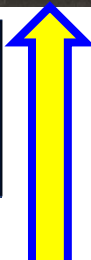
Problem solved by EN13044: Different owner identification systems



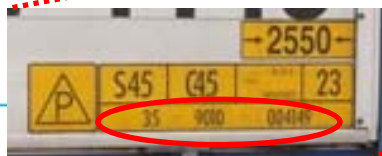
BIC-Code for containers
worldwide recognised
with check-digit



Number plate for semi-trailers



Codification plate for swap-bodies
lower part: owner-id not very visible



The solution: ILU-Code defined in EN13044-1



Advantages

- Everybody can easily trace the owner (via Internet and Smartphone)
- Owners receive reliable tracking und tracing information

- Check-digit reveals 95% of data entry errors
- Suitable for OCR (automatic gates)
- Prriority access to „Fast lanes“
- No new codification when selling ILUs
- Compatibility with BIC-Code for containers



For the first time the revision of the standard is accompanied by a deployment plan

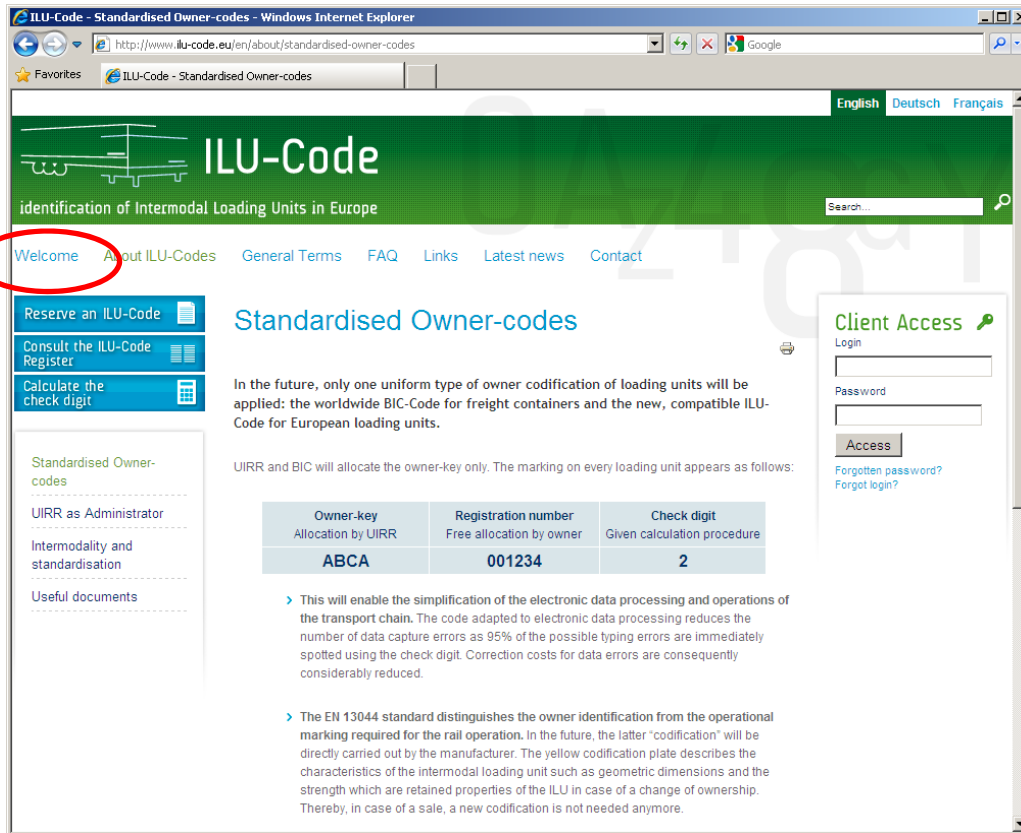
(Unanimous decision of INTERUNIT General Assembly – Brussels – October 2010)

UIC railway undertakings and UIRR operators have decided:

- From July 2011, UIRR will start issuing the ILU-Codes, new codification plates shall be used.
- **After a three-year transition period, from July 2014, only loading units equipped with a BIC- or an ILU-Code will be accepted at terminals.**
- After an eight-year transition period, from July 2019, every loading unit will have to be fitted with the new codification plate.

UIRR is administrator of the ILU-Code Launch of the www.ilu-code.eu website on July 1st, 2011

Downloads:
Info-folder in 10 languages



ILU-Code - Standardised Owner-codes

http://www.ilu-code.eu/en/about/standardised-owner-codes

English Deutsch Français

ILU-Code
identification of Intermodal Loading Units in Europe

Welcome About ILU-Codes General Terms FAQ Links Latest news Contact

Reserve an ILU-Code
Consult the ILU-Code Register
Calculate the check digit

Standardised Owner-codes

UIRR as Administrator

Intermodality and standardisation

Useful documents

Standardised Owner-codes

In the future, only one uniform type of owner codification of loading units will be applied: the worldwide BIC-Code for freight containers and the new, compatible ILU-Code for European loading units.

UIRR and BIC will allocate the owner-key only. The marking on every loading unit appears as follows:

Owner-key Allocation by UIRR	Registration number Free allocation by owner	Check digit Given calculation procedure
ABCA	001234	2

- This will enable the simplification of the electronic data processing and operations of the transport chain. The code adapted to electronic data processing reduces the number of data capture errors as 95% of the possible typing errors are immediately spotted using the check digit. Correction costs for data errors are consequently considerably reduced.
- The EN 13044 standard distinguishes the owner identification from the operational marking required for the rail operation. In the future, the latter "codification" will be directly carried out by the manufacturer. The yellow codification plate describes the characteristics of the intermodal loading unit such as geometric dimensions and the strength which are retained properties of the ILU in case of a change of ownership. Thereby, in case of a sale, a new codification is not needed anymore.



ILU-Code
Identification of Intermodal Loading Units in Europe

Nove oznake za intermodalne nosive jedinice u Evropi

Intermodális egységek

Intermodalitás és szabványosítás

New markings of intermodal loading units in Europe

Intermodality and standardisation

The introduction of containers and their worldwide standardisation have led to a significant increase in the volume of shipping which in turn brought about a significant expansion of world trade and created the basis for globalisation.

In continental transport, intermodality enables to combine the advantages of two or more transport modes. It reduces the high transport capacity, security and environmental performance of rail or inland navigation with the flexibility of road over short distances and in dense urban settings.

The new EN 13044 standard for the marking of intermodal loading units simplifies the access to Combined Transport and brings efficiency improvements for all those involved.

EU contains an shipping unit used by inland waterway and rail easily to support intermodal traffic. In continental transport, multi-modal loading units, standardised ESP (European Standard Platform) and on-site higher and lower the dimensions of road vehicles and on-site higher and lower the height, weight and transport capacity are suitable for use with every type of loading unit.

Also the owner identification of European loading units and ESP Containers will develop in a compatible way in the coming years.

GIM KALLAS
Vice-President of the European Commission and Transport Commissioner



Additional Service available

ILU-Code holders should mark their loading units with the new ILU-Codes as soon as possible.

In order to ease the process of marking for all customers, UIRR proposes with the support of a reliable partner as additional service the purchase of ILU-Code stickers on www.ilu-code.eu

Monitoring of the implementation of EN 13044 part 1 (ILU-Code)



ILU-Code Public Register on www.ilu-code.eu

- 472 registered owner-keys (4 letters)
 - 17% in 2011
 - 26% in 2012
 - 46% in 2013
 - 11% in 2014



- ?? really marked

- ACTIONS

- UIRR support = stickers service
- follow-up of the activities of other actors is required (market survey)

**Point of no return is now reached !!
 (important companies did the job)**

DESTINY: Best practice report, interviews with logistic companies, railway undertakings, CT operators and terminal managers

Acceptance by all concerned actors

- No doubts about the usefulness of the ILU-Code

Available Information

- The questions to the ILU-Code hotline mainly concern points that are already well documented on the website. But people want to be sure.

Loading unit owners

- Main concerns about the marking of old loading units.
- Approaching the deadline of July 2014: what will happen for units not marked?

Codifying entities

- Divers information from some railway undertakings – solved with revision of UIC CT-leaflets

Producers of loading units

- Want to deliver loading units already marked intermodal compliant

Consensus to keep the deadline.

A final press and information campaign in March to June 2014

• UIRR operators

- ILU-Code reference in all mailings with customers (bookings, commercial mailings, invoices)
- Updated booking procedures (check if customer books with or without ILU-Codes)
- Press articles
- Targeted workshops

• Terminal operators (AGORA-Group)

- Letters to all 'customers' (CT operators)
- Company specific measures after 1st July 2014
- (negative) measures on the 1st January 2015

• UIC railway undertakings

- Letter to all UIC members on the revised UIC leaflets on Combined Transport
- Letter to all 'customers' on the ILU-Code with a commitment to refuse loading units without ILU-Codes from 1st January 2015 (for all CT trains regardless the CT operator)

State of the play 04.03.2014

- 472 registred owner-keys from companies of 20 European countries

For all Combined Transport Customers:

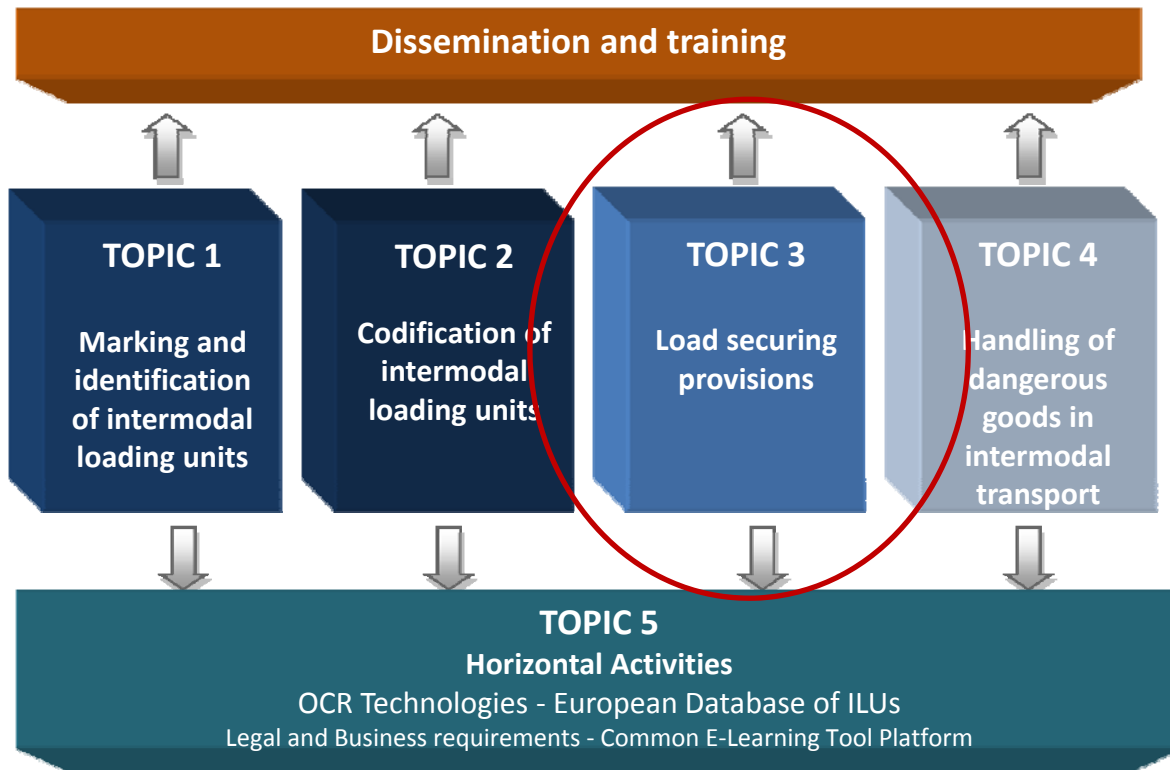
It is high time to register an owner-key and to mark all swap-bodies and craneable semi-trailers that are used in CT on rail.

... or BIC-Code for (maritime) containers



4th printed edition January 2014
Everybody may at anytime consult the
register online: www.ilu-code.eu

Topic structure

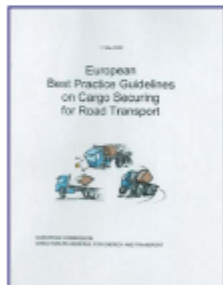


Load securing provisions

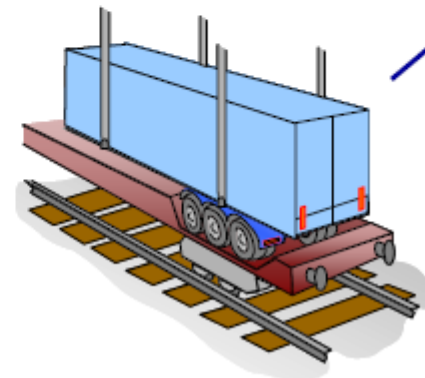
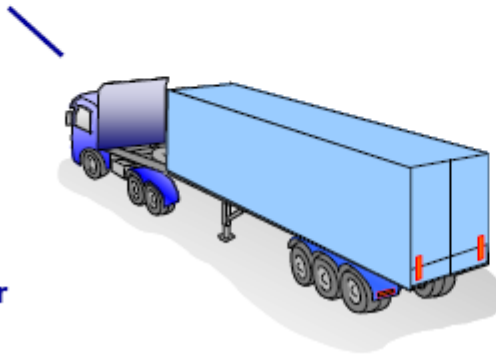
- Analysis of the current standards
- Analysis of the current needs
- Common guidelines for intermodal

Comparison road – rail basic requirements

Basic Cargo Securing Principles



EU Best Practice
Guidelines on
Cargo Securing for
Road Transport



UIC Loading
Guidelines

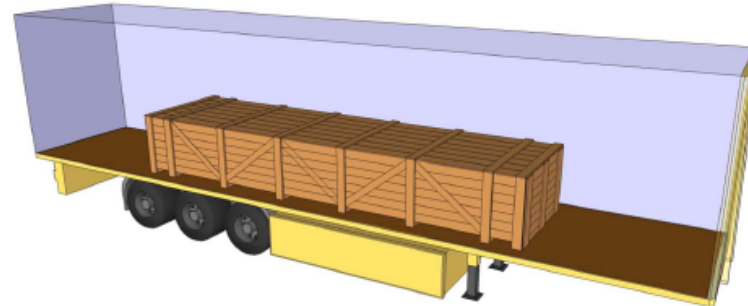
Required number of top-over lashings for combined rail transports

Wooden box

$m = 20 \text{ ton}$

$\mu_{\text{static}} = 0.45$

$\mu_{\text{dynamic}} = 0.34$



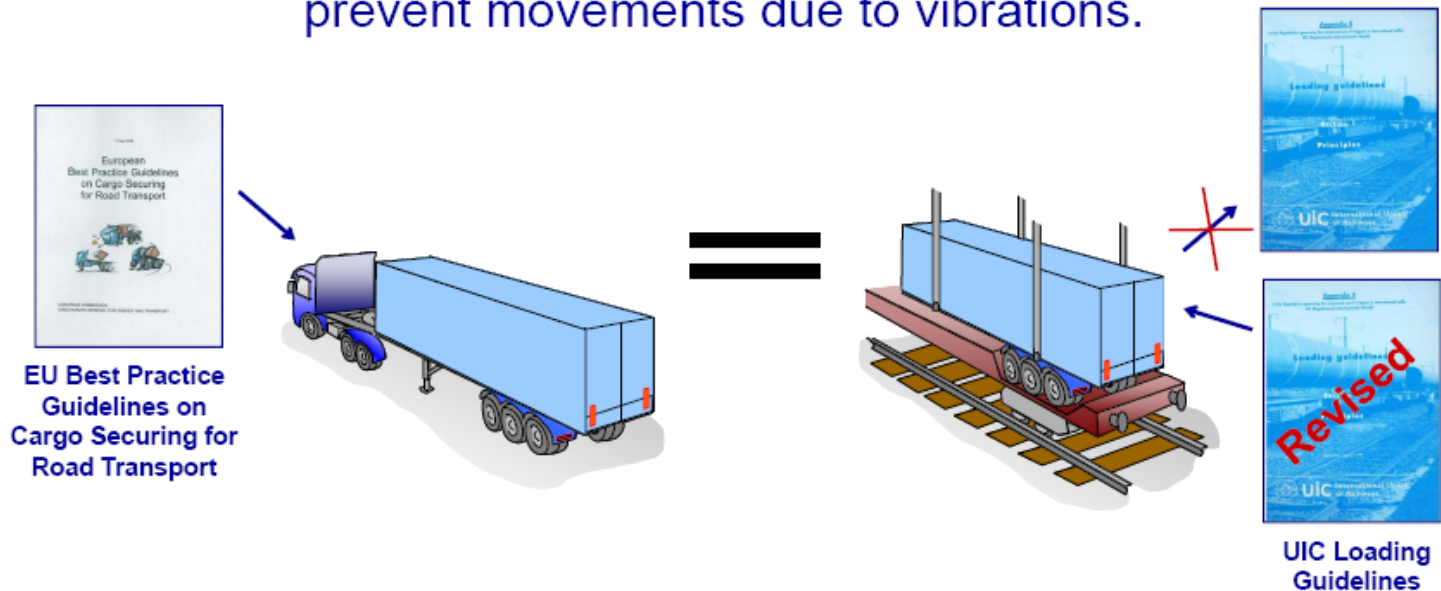
Required number of top-over lashings:

	Forward	Backward	Sideways	Factors
B-CARGO (Hupac)	83	83	33	$\mu_d, k = 1.5$
BGL (Kombiverkehr)	76	76	27	$\mu_d, k = 1.5$
VDI 2700-7 (Kombiverkehr)	57	57	20	$\mu_d, k = 2$
UIC Loading Guidelines (Novatrans)	Instructions for this type of cargo is not available			-
EN 12195-1:2010 Rail	35	35	12	$\mu_s, f_s = 1.1, (k = 2)$
EN 12195-1:2010 Road	25 or blocked	4	4	$\mu_s, f_s = 1.25/1.1, (k = 2)$
Packing Code Combined rail transport	4	4	4	$\mu_s, k = 1.8$



How to inform our customers...

Cargo secured according to the road regulations can in principle also be safely transported in combined rail transports. Some extra arrangement may be required to prevent movements due to vibrations.



Risk analysis with on-site terminal visits (static research) and with dynamic tests (semi-trailer / swap-body)

European Best Practice Guidelines on Cargo Securing for Road Transport



EUROPEAN COMMISSION
 DIRECTORATE-GENERAL FOR ENERGY AND TRANSPORT

Reference in the Roadworthiness package

Together for proper load securing

Safe load securing checklist
 Stay safe and compliant

Correct loading and securing of goods on most vehicles is essential to ensuring safe transport. It is important that the securing of goods on a vehicle is carried out in accordance with recognised standards, and in compliance with relevant national legal requirements for road traffic, most notably and worker protection. In order to improve load safety in practice, the IRI have developed this checklist of harmonised tips for safe loading and load securing.

Before loading a vehicle

- Make sure that the vehicle, in particular, is suitable for shipment of the specified load.
- Make sure that the load platform and the vehicle is in general in good condition and free from defects.
- Determine the optimal loading equipment for the intended use.
- Determine the load and weight to be loaded and the distribution of the load.
- Determine the number of vehicles and the number of vehicles to be used.
- Determine the number of vehicles and the number of vehicles to be used.

While loading and securing the load

- Load in accordance with the allowed limiting weight.
- Load in accordance with the allowed limiting weight.
- Arrange load and its individual components in a way that is safe and stable.
- Load in accordance with the current unloading equipment.



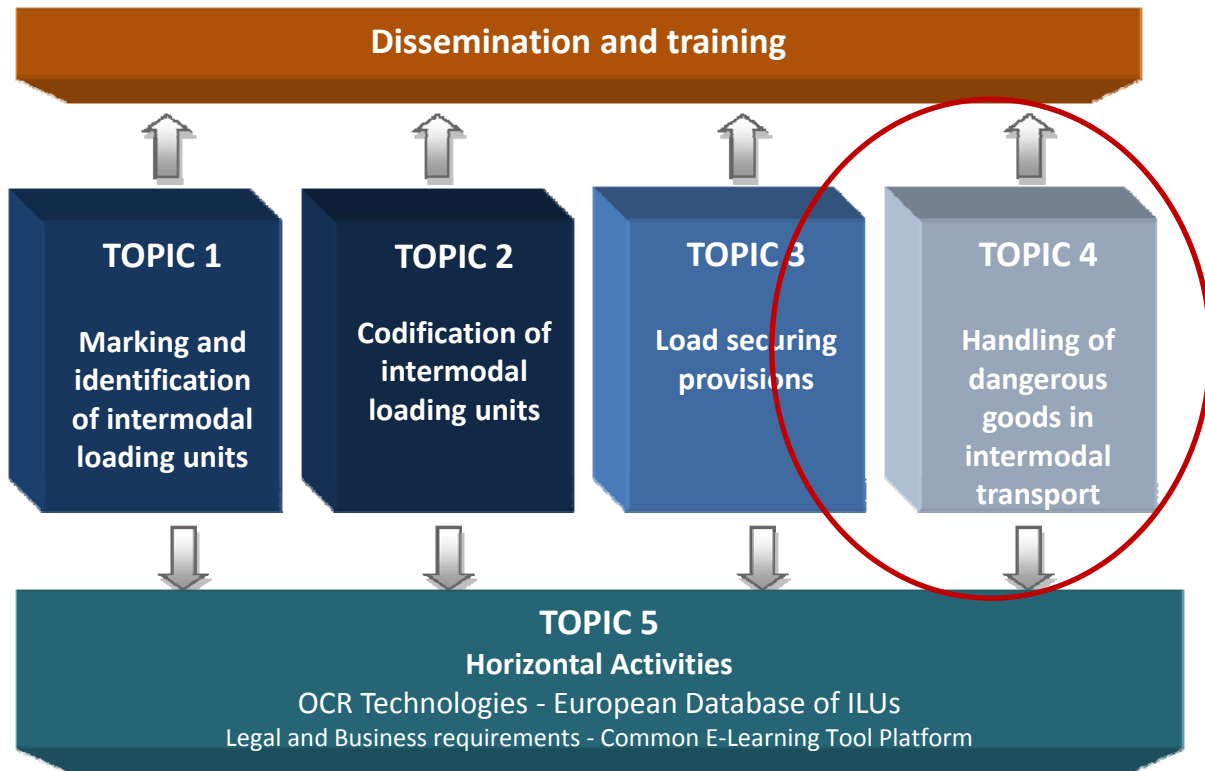
Under revision (EN 12195-1:2010 on cargo securing)



IRU Safe load securing checklist

Goods not secured according to UIC neither 'Best Practice Guidelines'

Topic structure



Dangerous Goods

- Market Analysis
- Analysis of national regulations
- Leaflets

Meaning of the orange-coloured plate marking



- 33 - Hazard identification number
- 1088 - UN number of the product

Dimensions: at least 30 cm x 40 cm

The hazard identification number consists of two or three figures. In general, they indicate the following hazards (according to ICD 5.2.2.3.1):

- 1: Emission of gas due to pressure or to chemical reaction
- 2: Flammability of solids (explosive) and gases or self-heating liquid
- 3: Flammability of solids or self-heating solid
- 4: Oxidizing (fire-intensifying) effect
- 5: Toxicity or risk of infection
- 6: Radioactivity
- 7: Corrosivity
- 8: Risk of spontaneous violent reaction
- 9: The substance will react dangerously with water

0: Where the hazard associated with a substance can be adequately indicated by a single figure, this is followed by zero (0). Qualifying of a figure indicates an intensification of that particular hazard (for ex. code 35 = highly flammable liquid).

Placarding and marking: the basics

Placarding according to column (B) and, where appropriate, column (B) of Table A of Chapter 5.2 and the orange-coloured plate marking shall be affixed in conformity with chapter 5.3 (ICD 5.3).

An orange-coloured plate bearing the hazard identification number and the UN number shall be affixed on both sides of the tank containers or portable tanks, MECCs and containers for carriage in bulk.

During rail carriage, the tanks must keep their placard or orange marking and, where applicable, their markings.

Placards/labels corresponding to the hazardous substance being carried and, where applicable, their markings, shall be affixed to the four sides of the swap-body, large containers, portable tanks, tank-containers, MECCs, tank semi-trailers (TIC) and containers for bulk carriage (part 5.5.1.2).

For tank containers transporting substances listed in ICD 4.2.4.1.1, the proper shipping name shall be inscribed in conformity with 6.5.2.2.2. The provisions for the marking of unit-load vehicles shall also be applied for unladen empty units (see 5.5.1.1 & ACR/RSI).

Example 3 Container with maritime journey

- Provisions placard(s) on the 4 sides
- Particulars only a dangerous good of more than 4 tonnes – addition of a UN number on the 4 sides

Example 8 Tank-container – various substances – with maritime journey

- Provisions placards and UN number on each side of each compartment

Example 9 Semi-trailer

- Provisions
- Change marking (numbers): at the front and at the rear
- OR
- 1/2 Placed on each side

Example 10 Semi-trailer with maritime journey

- Provisions placard on the 4 sides
- Particulars only dangerous good of more than 4 tonnes – addition of the UN number on the 4 sides

Example 11 MECC, multiple element gas containers with maritime journey

- Provisions placard and UN number on the 4 sides – proper shipping name on minimum two sides (height of characters 65 mm) (5.2.2.2 ICD)

Example 4 Bulk container

- Provisions placard(s) on the 4 sides = orange-coloured plate marking on the 2 lateral sides

Example 5 Tank-container (1 product)

- Provisions placard(s) on the 4 sides = orange-coloured plate marking on the 2 sides
- Particulars for high-temperature substances, the placard of 5.2.2 on the 4 sides

Example 6 Tank-container – various substances

- Provisions placard on both sides of each compartment and also a placard for each model on both ends = orange-coloured plate marking on both lateral sides of each compartment

Example 7 Tank-container (with maritime transport)

- Provisions placard and UN number on the 4 sides – proper shipping name on minimum two sides (height of characters 65 mm) (5.2.2.2 ICD)

Combined Transport is a safe and environmentally-friendly transport technique

Reduction of CO₂ emissions in Road-Rail CT



Considerable increase of transport safety in rail transport



Importance of Combined Transport with Dangerous Goods





THE ROAD-RAIL COMBINED TRANSPORT OF DANGEROUS GOODS
 Version 2013-2014

DESTINY
 supported by the Marco Polo Programme

General informative leaflet in nine languages (CZ – DE – EN – FR – IT – NL - PL – SE – SI)

Available on <http://www.uirr.com/en/media-centre/leaflet-and-studies/mediacentre/630-informative-leaflet-on-dangerous-goods-destiny.html>