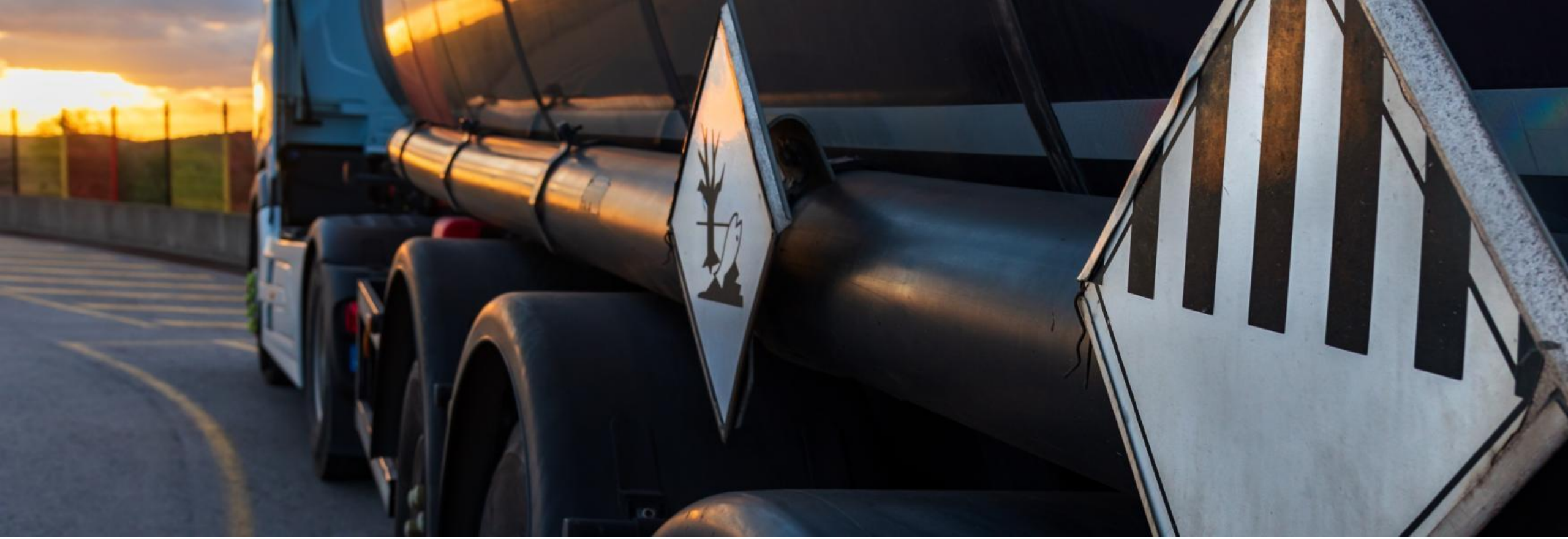
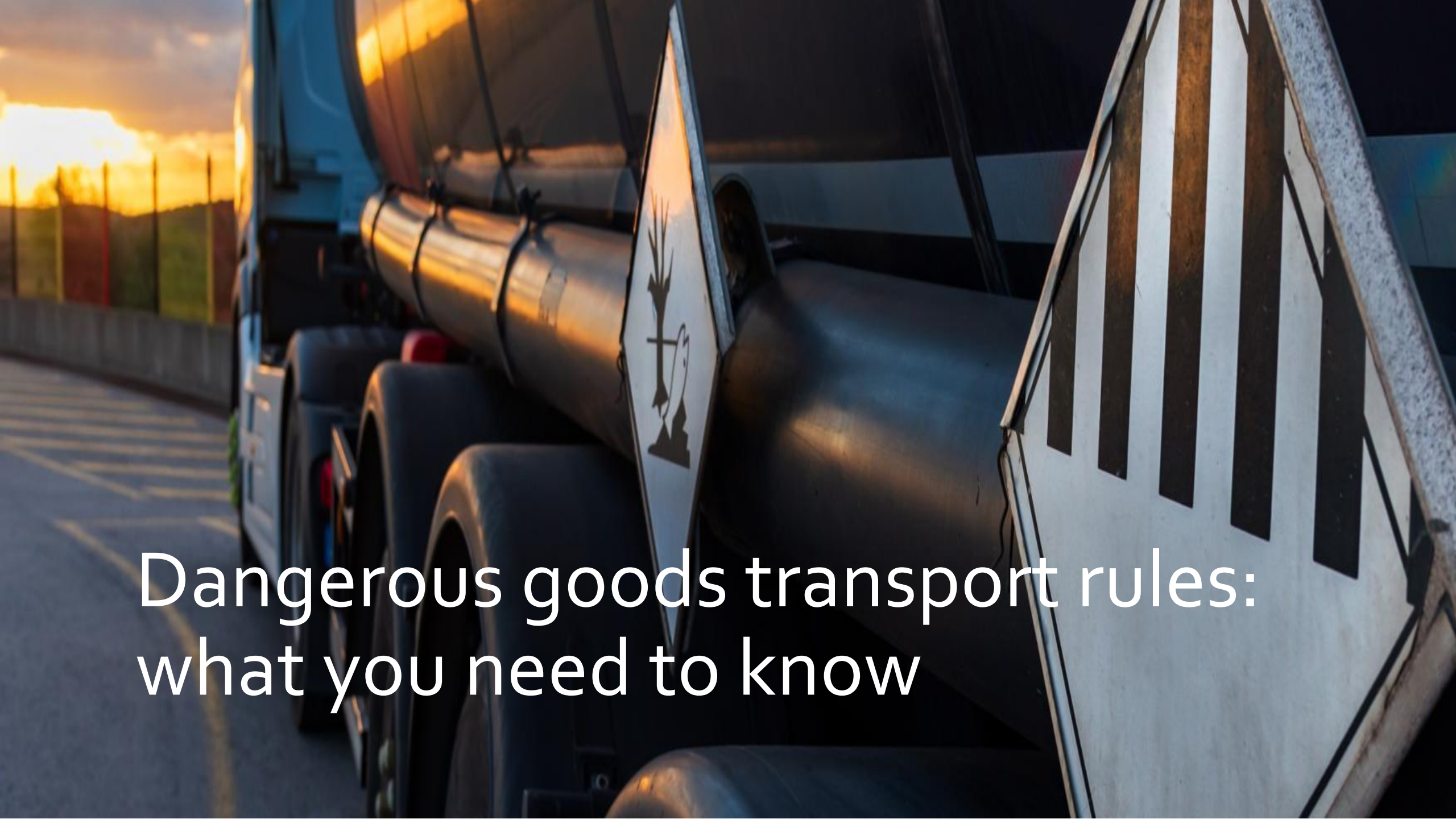


Advocacy webinar on the transport of dangerous goods

Dangerous goods transport rules: what you need to know



Dangerous goods transport rules: what you need to know

IRU Antitrust Statement

All participants in this meeting should be fully aware of competition law and shall thus not enter into any discussion, activity or conduct that may infringe any applicable competition law. By way of example, participants shall not discuss, communicate or exchange any commercially sensitive information, including:

- *prices, discounts, margins, credit terms, warranties or terms and conditions.*
- *data regarding costs, production, investments, capacity, inventories, sales, orders, revenues or profits.*
- *plans regarding the development, design, production, distribution or marketing of particular products.*

This meeting has no authority to discuss matters relating to actual or potential competitors, suppliers, distributors or customers of participants in the meeting that might have the effect of excluding them from any market.

Participants are cautioned that any discussion, activity or conduct on the abovementioned topics or concerning any other competitively sensitive topics, either on the floor or off is strictly prohibited.

In case of doubt, please discuss with the Secretariat of the meeting or contact IRU's Compliance Committee by email (compliance.committee@iru.org) *in advance.*

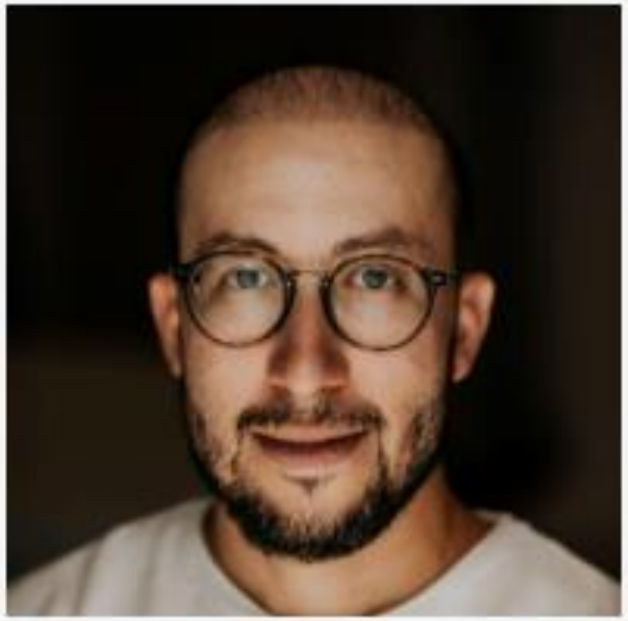
How can battery-electric vehicles be safely and effectively used for the transport of dangerous goods?

What are the main challenges and best practices for handling repacked or undeclared dangerous goods in reverse logistics?

What new provisions are expected in the 2027 ADR Regulation, and how might they impact transport operations?

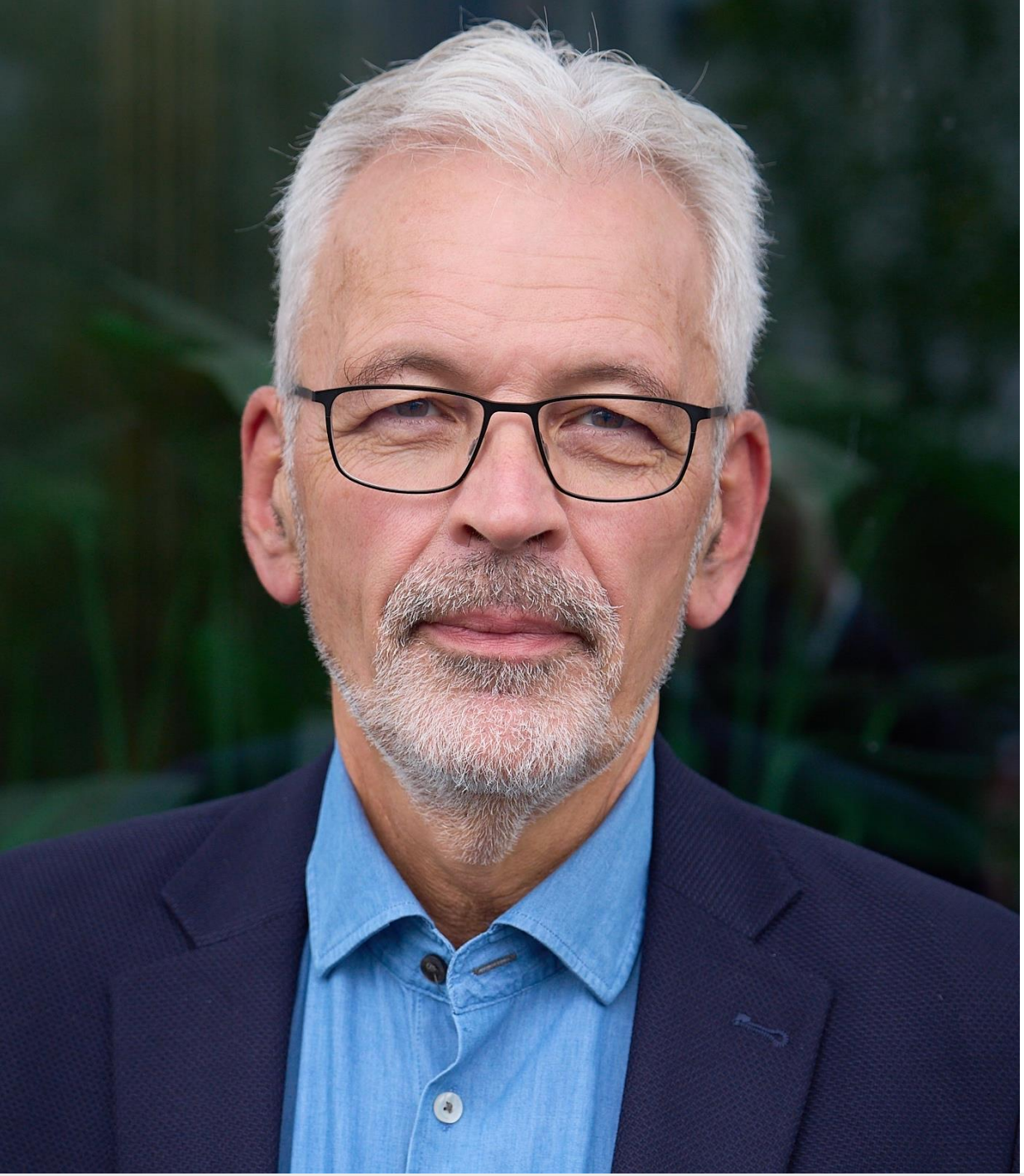
Speakers

Pedro Arcain
Regulatory & Public Affairs
Amazon



Hamza Guirrou
Technical Affairs Adviser
IRU

Ivan Schmelczer
Senior Adviser - ADR Expert
IRU



Opening remarks

Dag Nordvik,
President of Commission on Innovation and Technology

ACADEMY

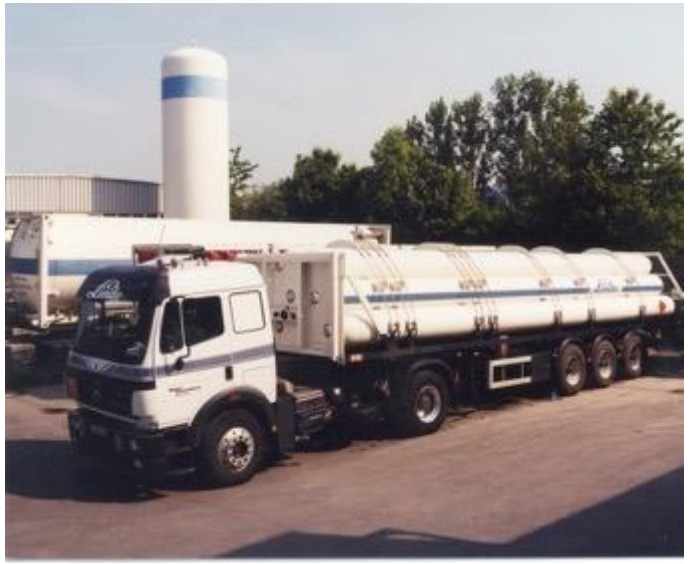
How can battery-electric vehicles be safely and effectively used for the transport of dangerous goods?

Webinar, 11/11/2025

Ivan Schmelczer, UN Consultant, IRU

Basic definitions

- **A battery vehicle** means a vehicle containing elements which are linked to each other by a manifold and permanently fixed to the vehicle
  - IMDG: Road gas elements vehicle
- **Battery electric vehicle** is a type of electric vehicle that is powered entirely by electricity stored in onboard rechargeable batteries. It uses one or more electric motors for propulsion and has no internal combustion engine or fuel tank.



UN numbers for BE vehicles

- UN 3556 VEHICLE, LITHIUM ION BATTERY POWERED
- UN 3557 VEHICLE, LITHIUM METAL BATTERY POWERED
- UN 3558 VEHICLE, SODIUM ION BATTERY POWERED

Safety measures

- E-bikes or e-scooters
- Passenger transport vehicles and goods transport vehicles
  - Battery management system
  - Coolant system
  - Battery switch-off system
  - Fire suppression system
    - Initial fire
    - Fire propagation

Introducing zero-emission vehicles to ADR

- ADR 2025
  - 9.2.1.1

		VEHICLES				COMMENTS
TECHNICAL SPECIFICATIONS		EX/II	EX/III	AT	FL	
9.2.4	**VEHICLE PROPULSION SYSTEM**					
9.2.4.2	Fuel tanks and cylinders	X	X	X[h]	X	[h] Applicable to motor vehicles using fuels other than hydrogen, first registered after 31 December 2026
9.2.4.3	Internal combustion engine	X	X	X[i]	X	[i] Applicable to motor vehicles first registered after 31 December 2026.
9.2.4.3.1	Engine	X	X	X[i]	X	[i] Applicable to motor vehicles first registered after 31 December 2026.
9.2.4.3.2	Exhaust system	X	X		X	
9.2.4.4	Electric power train			X		
9.2.4.4.1	General provisions			X	X	
9.2.4.4.2	Rechargeable electrical energy system			X[i]	X	Applicable to motor vehicles first registered after 31 December 2026.
9.2.4.4.3	Measures against thermal propagation				X	
9.2.4.4.4	Vehicle charging inlet				X	
9.2.4.5	Hydrogen fuel cell			X	X	

Introducing zero-emission vehicles to ADR

- **9.2.4 Vehicle propulsion system**
  - Hybrid vehicles equipped with an internal combustion engine and electric powertrain shall comply with the relevant provisions of 9.2.4.2 to 9.2.4.5.
  - 9.2.4.1 General provisions
  - 9.2.4.2 Fuel tanks and cylinders
  - 9.2.4.3 Internal combustion engine
  - 9.2.4.4 Electric power train
  - 9.2.4.5 Hydrogen fuel cell vehicles

Electric powertrain

- Electric powertrains shall not be used for EX vehicles. Trailers with re-generative braking or electric powertrains are not allowed
- Isolation resistance monitoring system
- Rechargeable electrical energy storage system (REESS)
- Measures against thermal propagation to mitigate danger to the load by heating or ignition
- Vehicle charging inlet
  - shall be provided with thermal sensing function which limits or interrupts current transfer

Plans for future amendments

- EX/II and EX/III vehicles: ADR 2029
- TPMS system: ADR 2027
- Standalone electric systems to energise accessories mounted on vehicles

Q&A

Retail delivery of Dangerous Goods

November 11th, 2025

Pedro Arcain, Regulatory & Public Affairs
hparcain@amazon.com

amazon

Amazon in Europe

We are in the EU for the long term

At a glance:

230,000+
EMPLOYEES

127,000+
SMEs SELLING ON AMAZON EU

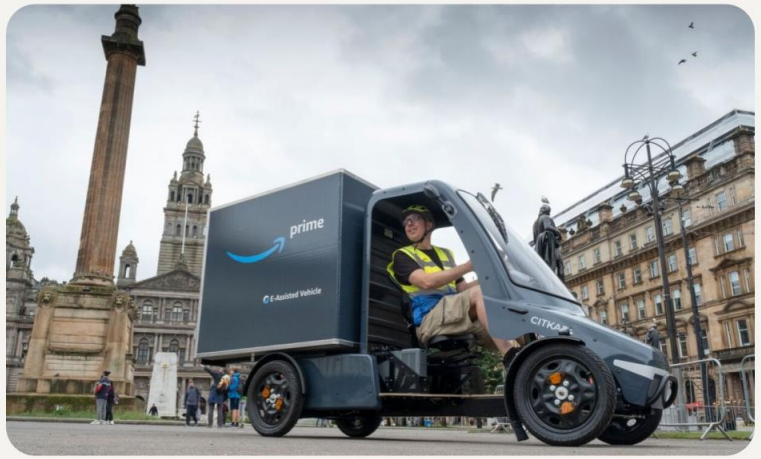
200+
SITES ACROSS EU

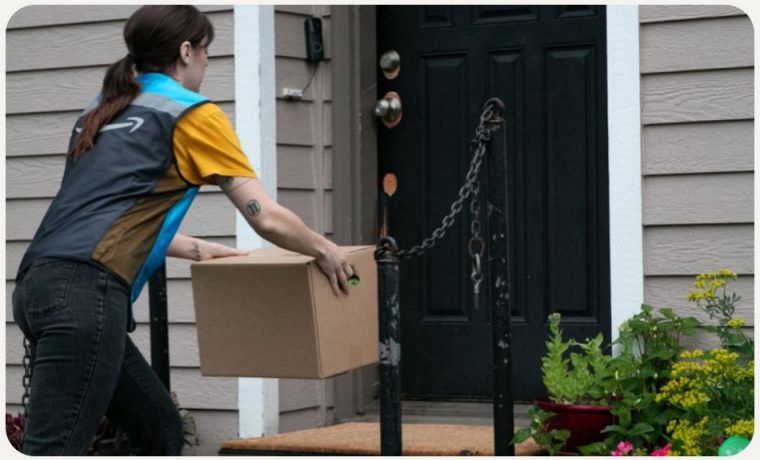
€320 bn+
INVESTMENT IN EU OPERATIONS SINCE 2010

10,000+
ELECTRIC VEHICLES BY 2025

100%
RENEWABLE-POWERED OPERATIONS BY 2025

Retail Delivery of Dangerous Goods





€338B

Global DG transport & storage market projected by 3031

Allied Market Research 2024

16%

Lithium battery shipments projected to grow 16% annually

6.8%

Everyday items like aerosols projected to grow 6.8% annually

Challenges

1.

Over the last decades, logistics has been transformed

Customers expect faster, smaller, and more flexible deliveries

2.

Regulatory frameworks were built for another era

An era of industrial bulk transport, not for millions of safely managed small retail parcels

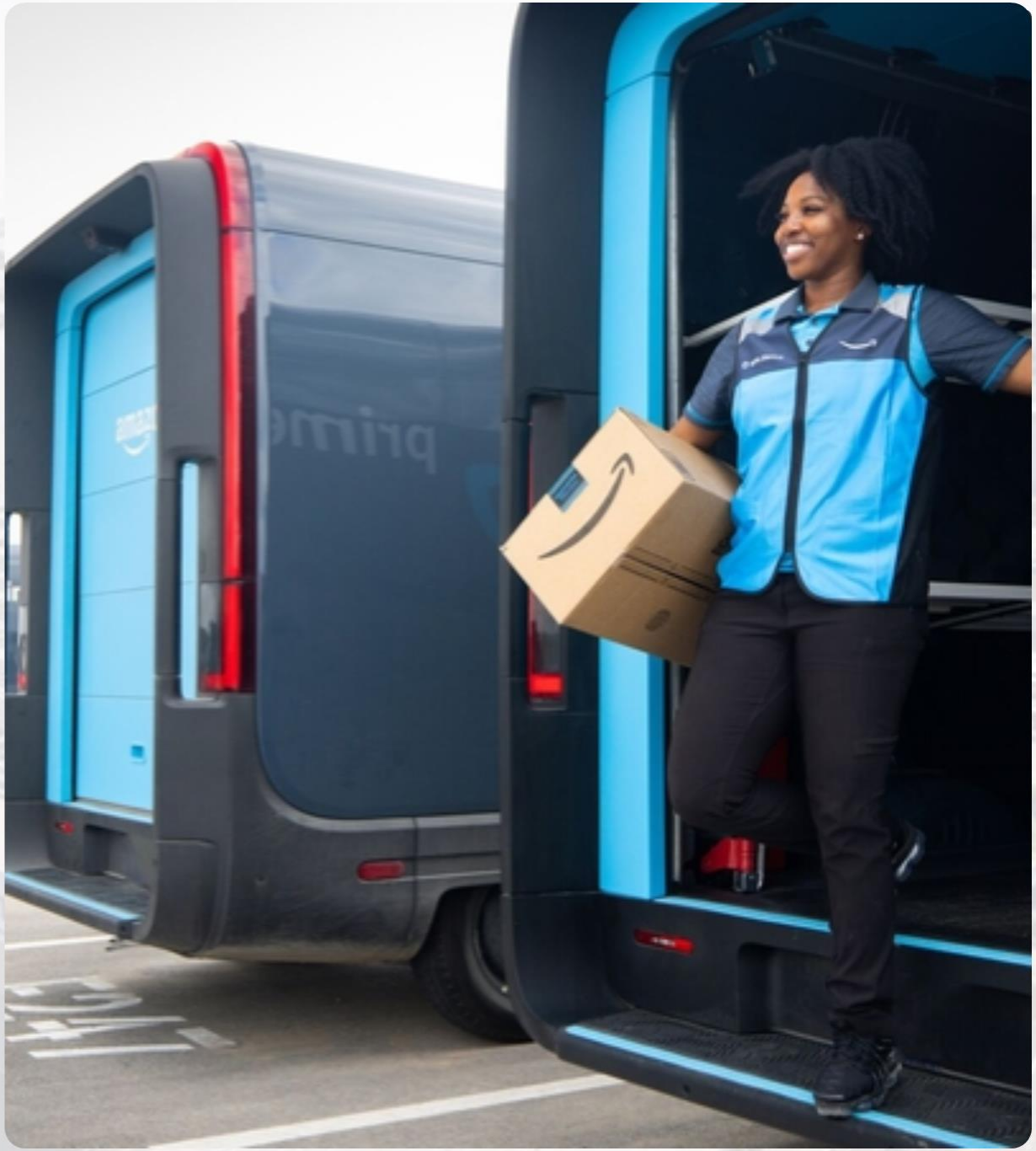
3.

Modern logistics can ensure safety with less friction

And support technology-enabled modernization, sustainability, and economic growth.

UN ADR/ADN/RID Joint Meeting Proposal

Retail Delivery



Proposal to insert new definition for retail delivery 1.2.1 RID/ADR

"Retail delivery means a concluding segment of carriage where consumer products are delivered by a retailer or carrier to private individuals, in lieu of the private individuals taking immediate possession. Retail delivery includes carriage from a retail distribution centre or store, or similar facility, to the final point of collection, or receipt by private individuals."

Proposal to insert new paragraph (g) in 1.1.3.1 of RID/ADR

The objective is to create an exemption that allows retail delivery items to be transported safely with less friction:

1. Retail packaging
2. Driver communication
3. Hazard communication
4. Weight limit per transport unit

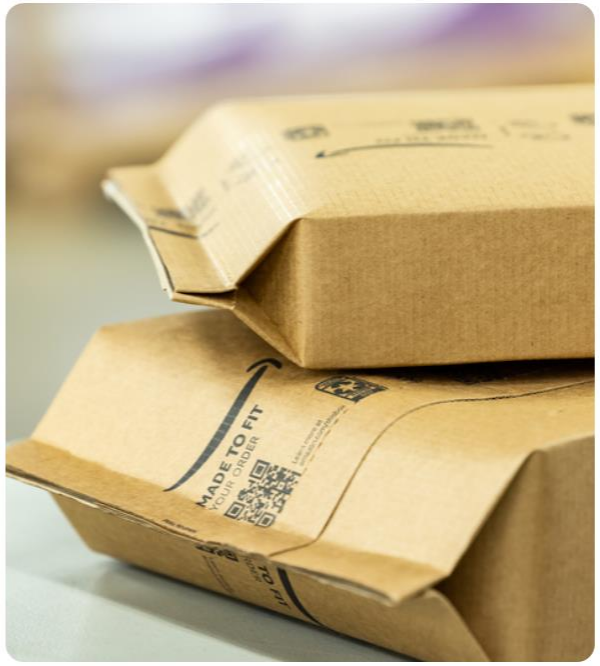
INF 40, ADR/ADN/RID Joint Meeting September 2025

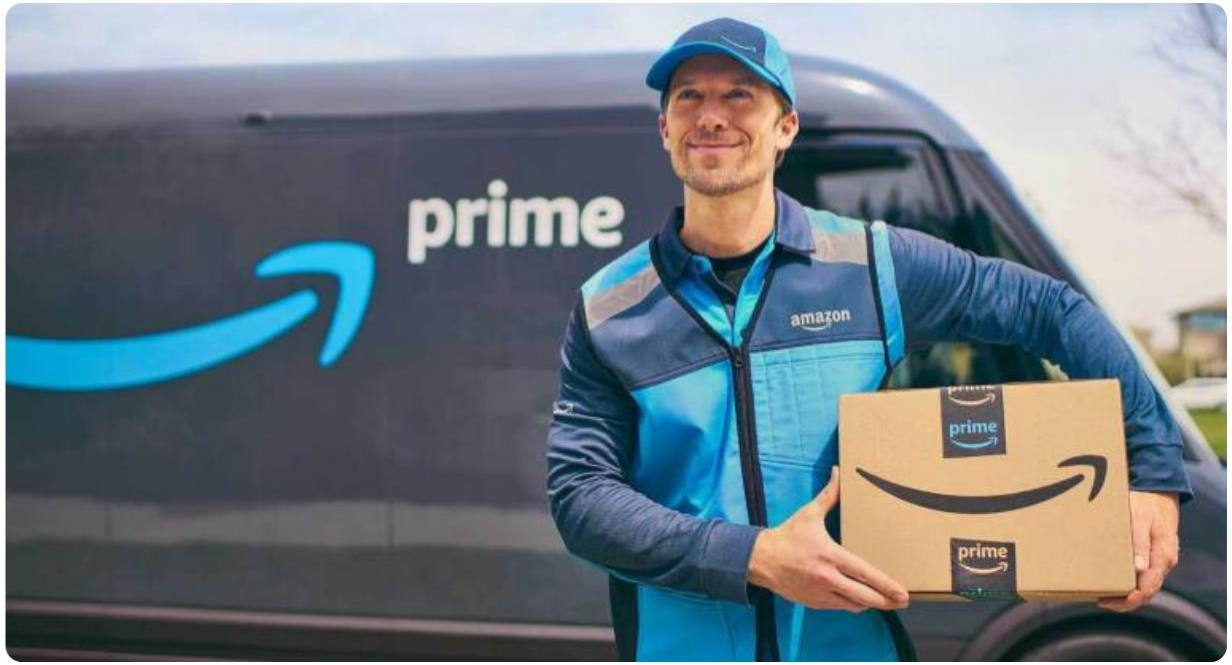
The way forward

We’re working closely with associations and country delegations to refine the open points – hazard communication and weight per transport unit.

A paper will be submitted by an association to the upcoming ADR/ADN/RID Joint Meeting in early 2026.

Our goal is to support consensus and inclusion in the 2029 ADR revision.





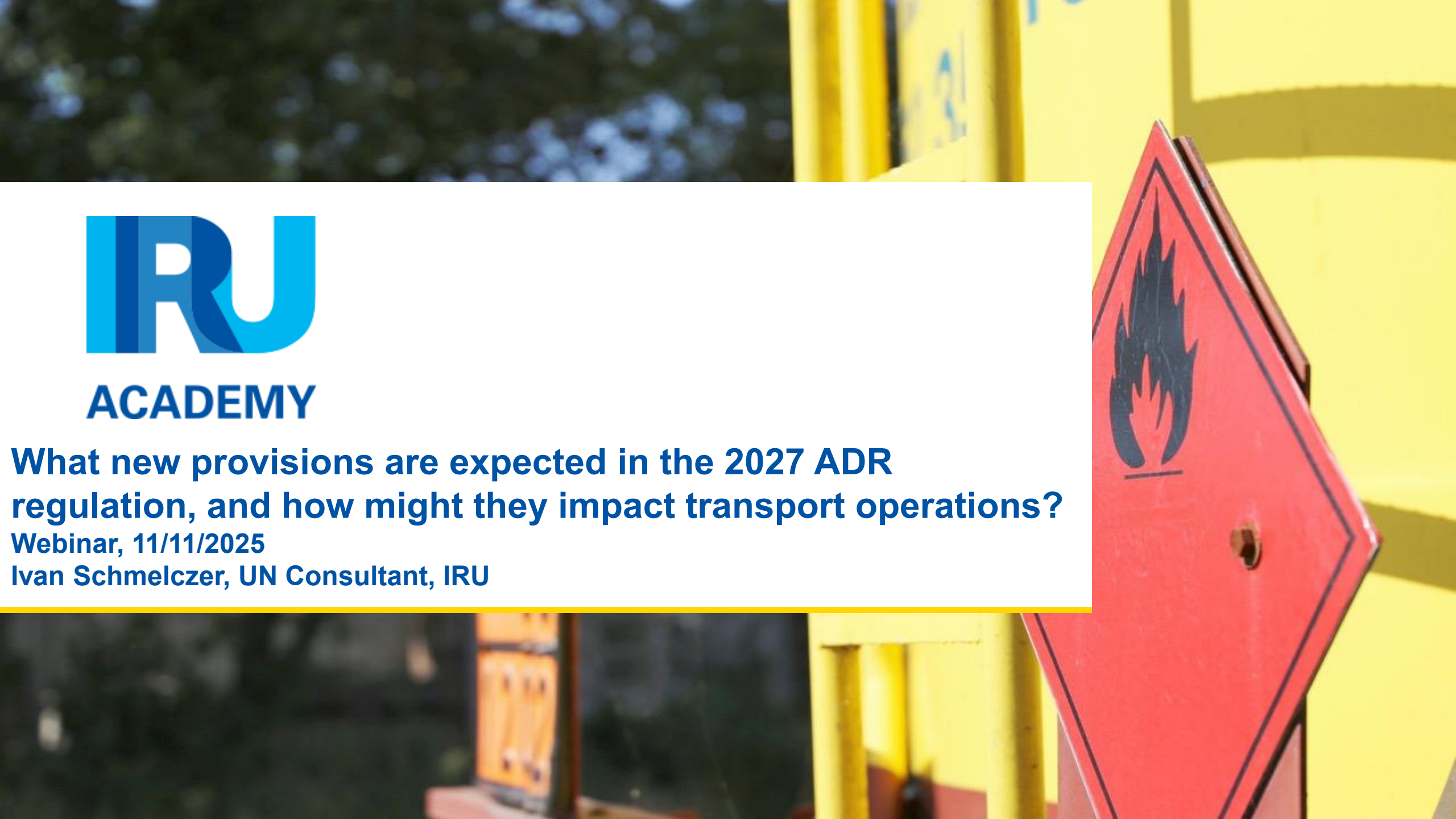
Returns

Could returns be included in the future?

At this stage, the proposal focuses only on retail packages delivered to private individuals, where consensus is easier to build. In the future, similar principles could apply to returns, provided that safety remains the utmost priority.

Your input is more than welcome!

Q&A



ACADEMY

What new provisions are expected in the 2027 ADR regulation, and how might they impact transport operations?

Webinar, 11/11/2025

Ivan Schmelczer, UN Consultant, IRU

New UN numbers

(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
2348	BUTYL ACRYLATES, STABILIZED	3	F1	II	3	386 676	1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		FL	2 (D/E)	V8			S2 S4 S20	339
2862	VANADIUM PENTOXIDE, non-fused form, containing not less than 10 % respirable particles	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33 TP43	SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60
3561	CHLOROPHENOLS, CORROSIVE, TOXIC, SOLID, N.O.S.	8	CT2	II	8 +6.1	274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN		AT	2 (E)	V11		CV13 CV28		86
3562	CHLOROPHENOLS, CORROSIVE, SOLID, N.O.S.	8	C4	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN		AT	2 (E)	V11				80
3563	LITHIUM METAL BATTERIES INSTALLED IN CARGO TRANSPORT UNIT	9	M4		9	389 410	0	E0									2 (E)					90
3564	SODIUM ION BATTERIES INSTALLED IN CARGO TRANSPORT UNIT	9	M4		9	389 410	0	E0									2 (E)					90

1.1.3.6 exemption

- 1.1.3.6.3 table
  - Deletion of Table note 'a'

[a] *For UN Nos. 0081, 0082, 0084, 0241, 0331, 0332, 0482, 1005 and 1017, the total maximum quantity per transport unit shall be 50 kg.*

1.1.3.6.4 Where dangerous goods of different transport categories are carried in the same transport unit, the sum of:

- The quantity of substances and articles of transport category 1 multiplied by "50";
- The quantity of substances and articles of transport category 1 referred to in note a to the table in 1.1.3.6.3 multiplied by "20";
- The quantity of substances and articles of transport category 2 multiplied by "3"; and
- The quantity of substances and articles of transport category 3;

shall not exceed a calculated value of "1 000".

Driver training requirements

- Definitions
  - E-learning: asynchronous teaching conducted with information and communication technology tools where trainees and trainers are separated in both space and time
  - Remote training: synchronous teaching conducted with information and communication technology tools where trainees and trainers communicate simultaneously and are separated in space
- **Initial training**: in-person training, remote training, or a combination of these
- **Refresher training**: in person, remote training, e-learning, or a combination of these. The theoretical part of the training shall not be delivered entirely as e-learning

Definitions for pressure receptacles

- Cylinder, bundles of cylinders, tubes, salvage pressure receptacle
- Harmonisation with PED (Directive 2014/68/EU)
  - Introducing the pressure-volume product value [bar litre]
  - …a test pressure volume product not exceeding 1.5 million bar litres

Elimination of dual approval

- Portable tanks: 4.2, 6.7
- Tank containers: 4.3, 6.8
- Transitional measures may be used until the next periodic inspection carried out after 1 July 2031

Q&A

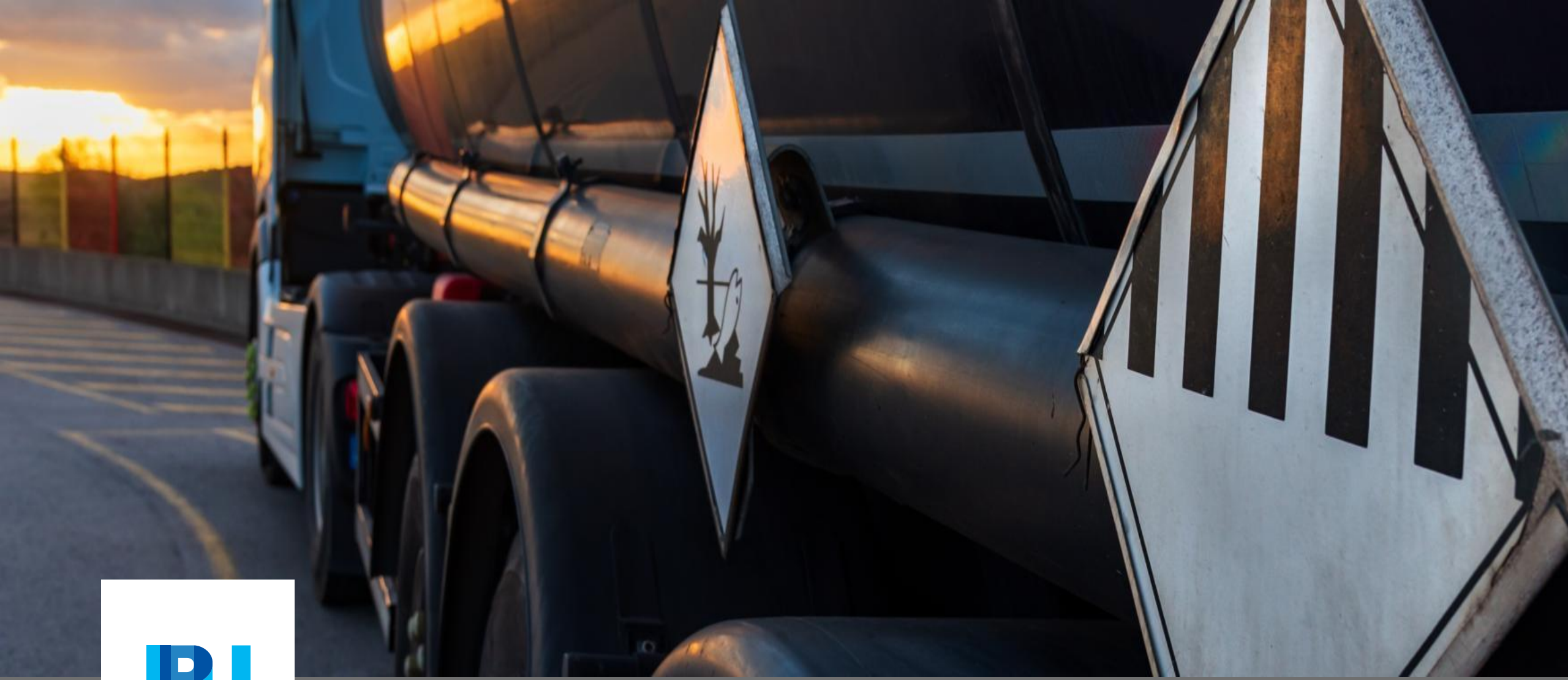
Closing remarks

Peter Svensson,
Vice President of Commission
on Innovation and Technology

Next Steps

The upcoming IRU webinar on ADR, titled **Dangerous goods and the UN ADR agreement: Global convergence?**, will take place on **Wednesday 3 December 2025 at 10:00 CET**

- What's new with ADR?
- Are non-ADR regions such as Asia, the Middle East and Latin America moving towards compliance with global ADR standards?
- How can ADR drive trade, safety and resilience in global supply chains?



Should you have any other questions:
hamza.guirrou@iru.org
Jens.Huegel@iru.org

iru.org