



University of Antwerp  
| Faculty of Law

***Platform Logistics:  
Law as a Catalyst or Bottleneck to Sustainable IWT***

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# Overview

1. **Background**
2. Looking inside the black box –Functionalities, responsibilities and qualification-
3. Dealing with platform power –with great power comes great responsibility-
4. Pathways for IWT in platform ecosystems

# Background

IWT sector as frontrunner in “platform economy”



IWT lagging behind in platformisation



Two new shipping companies have joined the blockchain shipping platform TradeLens used for the global shipping supply chain. German Hapag-Lloyd and Singapore-based Ocean Network Express (ONE) have announced they will participate in TradeLens. With these additions, five out of six of the biggest shipping companies are now on the blockchain platform, and TradeLens now covers more than 90% of the world's ocean container cargo.

by Reuters  
2, 2019

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## Not all success stories...

TRADE+LENS

### IBM, Maersk pull the plug on blockchain-based TradeLens shipping platform



BY KYT DOTSON

Computing giant IBM Corp. and Danish shipping company A.P. Moller – Maersk are [discontinuing](#) their blockchain-enabled shipping platform, TradeLens, which was jointly developed by the two companies for tracking shipments and managing supply chains in the container industry.

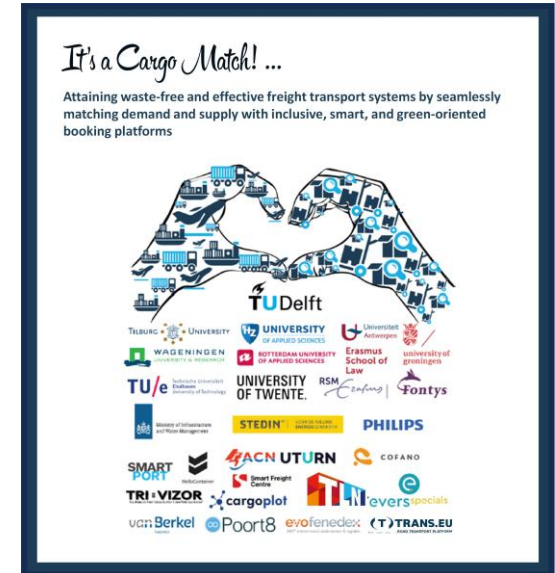
Maersk announced late Tuesday that the platform had failed to meet its commercial goals necessary to sustain itself, and thus the two companies are now pulling the plug on the platform. It's expected to go offline by the end of the first quarter of 2023.

*The lack of incentives to convince shippers and freight forwarders, cost overruns and the governance model are the main reasons for the closure of TradeLens*

# Platformization as a network industry

- **Platformization requires adoption by and thus value realisation for all actors in the ecosystem.**
  - Problem: **Competition** existing actors (See FMaaS project: “what with Forwarding agent USPs?”)
- **IWT as part of broader maritime/ transport ecosystem necessitates adaptation to technologies adopted in the broader ecosystem.**
  - Risk: emerging FMaaS/ LaaS: Lack of integration disconnects IWT from ecosystem (esp in container trade) → Increase critical distance due to additional administration.
  - Risk 2: integration necessitates business model changes ↔ existing ecosystem relationships.
    - Terminal D&D charges
    - Compensation for delay...(art. 20.3 CMNI: risk free transport)

# Platform Regulation in our research



PhD projects (defended):

- Managing platform power through contract law.
- Managing platform power of **retail** platforms through competition law.

PhD projects (ongoing):

- Managing platform power of **labour** platforms through contract and competition law.
- Passenger rights protection in case of **platform mobility**

-Interdisciplinary inter-university project.

- Legal WP:
- PhD project: Risk distribution in logistic chain
- Postdoc project: social standards & competition.

# Platform logistics... not in my IWT?



- The project builds on the pillars defined in the Inland Waterway Transport Digitalisation Vision, focusing on:
- **Smart Administration:** streamlining reporting and regulatory procedures through digital tools and single windows;
- **Smart Vessels:** promoting automation and the use of next-generation technologies on board;
- **Smart Infrastructure:** enabling continuous, cross-border corridor management through digital twins and intelligent systems;
- **Smart Data:** establishing trusted, interoperable data spaces to connect IWT with other transport modes.
- <https://www.inlandwaterwaytransport.eu/divine-project-kicks-off-implementing-the-digitalisation-vision-for-iwt-in-europe/> (2 October 2025)

# 4-dimensional approach to platform ecosystems

1. **Regulatory obstacles**
2. **Risk distribution**
3. **Power**
4. **Trust**

# 4-dimensional approach to platform ecosystems

## 1. Regulatory obstacles

1. Mapping regulatory obstacles
2. Evaluating underlying policy objectives
3. → Make recommendations for goal-based regulation

## 2. Risk distribution

1. Map impact disruption on risk distribution in contract chains
2. Make recommendations for steering risk disruption to distributive party
3. Ensure alignment in contract chain/ ecosystem
4. → Make recommendations for seamless risk-neutral risk distribution mechanisms

# 4-dimensional approach to platform ecosystems

## 3. Power

1. Eliminate obstacles standing in the way of pareto efficient outcomes
2. Assess possible abuses of power
3. → Provide proposals to expand existing power balancing mechanisms to disruptive business models.

## 4. Trust

1. Map trust enablers and deficits platform ecosystems.
2. Embed transparency, traceability, and auditability into platform operations.
3. Align legal accountability with algorithmic responsibility.
4. → Promote “trust by design” as a condition for sustainable digital ecosystems.

# Legal obstacles (overview)

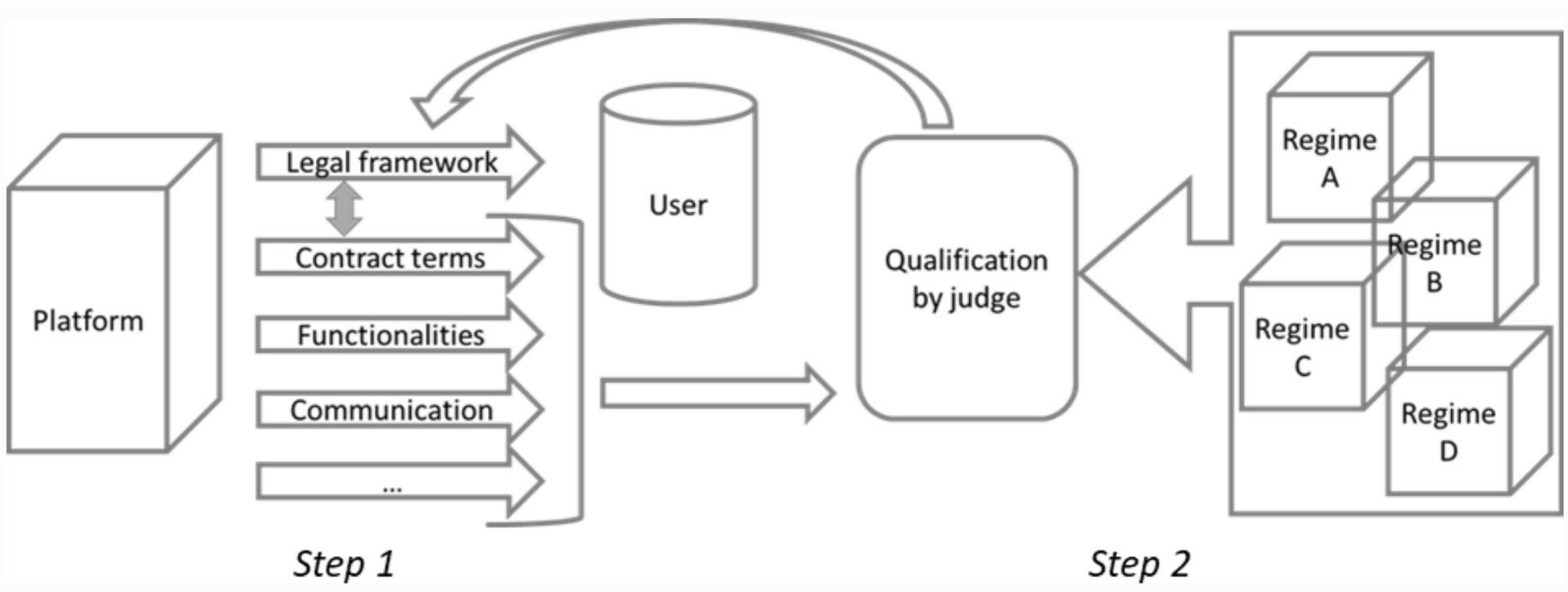
Paper	Liability	Tech	Trust	Regulation	Compliance	Digitalization	Reliability	Adoption	Competition	Labor	Dependencies	Contractual Risks	Organizational Risks	Pricing
Sullivan (2021)	X	X	X	X	X	X			X	X				
Le Pira et al. (2021)				X		X								
Xiao et al. (2023)		X						X						
Verheyen (n.d.)				X										
Pourrahmani & Jaller (2021)		X	X		X	X	X	X						
Kodym et al. (2020)	X	X		X		X		X		X	X			
Ko & Song (2021)		X												
Herold et al. (2023)			X						X					
Gruchmann et al. (2020)		X				X			X					
Domurath (2018)	X											X		
Dinu et al. (2024)		X		X		X	X							
Xiao et al. (2023)		X	X			X								
He et al. (2025)		X			X				X					
Jain et al. (2019)									X					
Standing et al. (2019)			X	X										
Guo et al. (2022)														X
Kořacz & Verheyen (2025)	X													

Literature review N. El Alaoui, 2025

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# Looking inside the black box –Functionalities, responsibilities



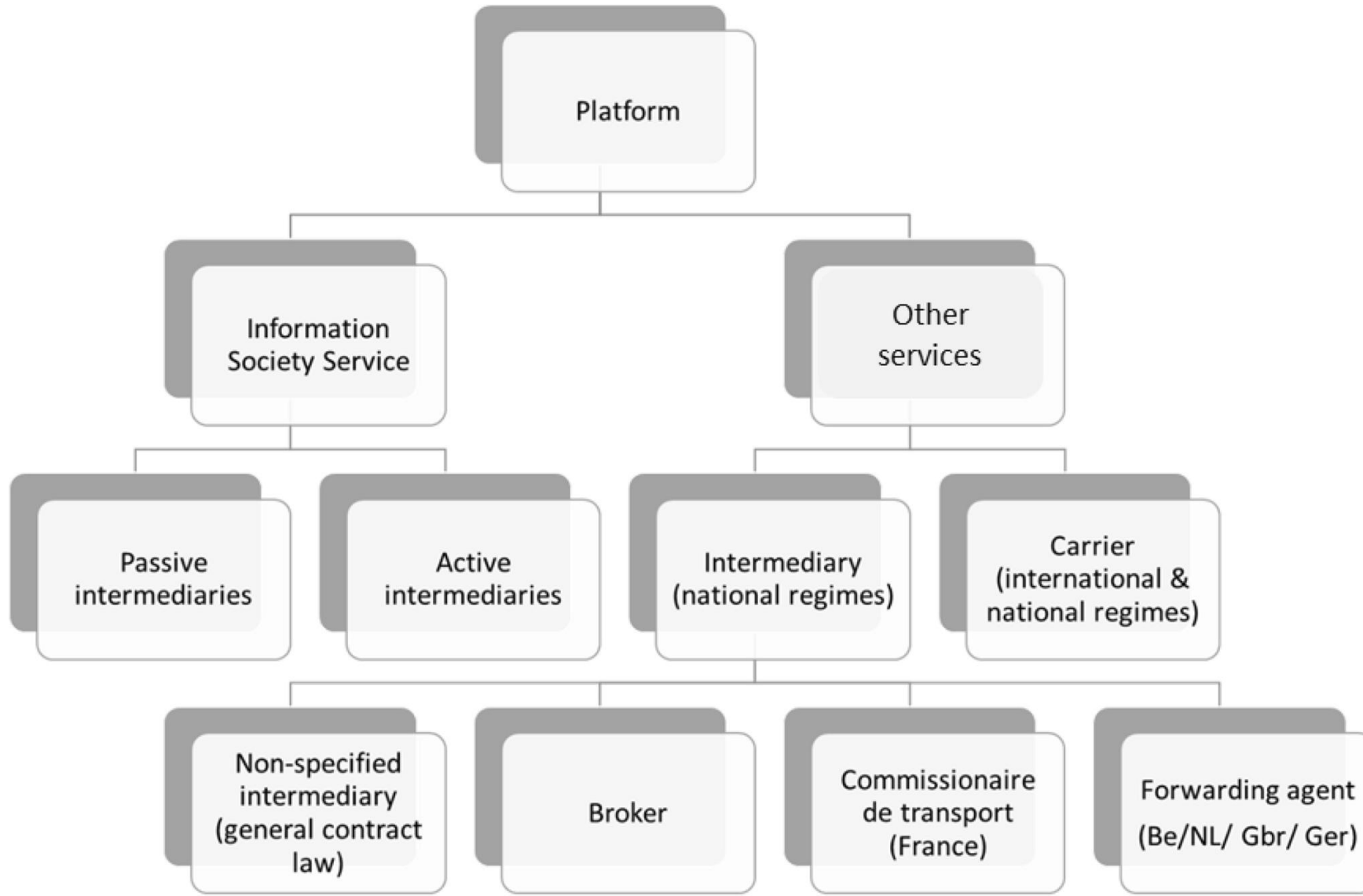
Kołodziej, M. K., & Verheyen, W. (2025). Understanding the legal status of online logistics platforms in Europe: a decision framework for service providers improving legal certainty in the platform context. *Journal of Shipping and Trade*, 10(1), 9.

# Conflicts between advertised functionalities and claimed self-qualification

Category	Provider	Description of the service	Self-qualification in T&C
Auction	Cogoport <a href="#">2020</a>	Provides rates of verified logistics providers (shipping liners, freight forwarders, transporters, customs house agents, etc.)	'Cogoport acts <b>as an intermediary</b> enabling the buyers and sellers to conclude a contract with each other'
Negotiation	Sennder <a href="#">2022a</a> , <a href="#">b</a> , <a href="#">c</a> , <a href="#">d</a> , <a href="#">e</a>	An advanced platform for both shippers and carriers. Clients are supported with a personal dispatcher. The platform supports shippers in allocating full-truckload shipments. It also invites carriers to become 'sennder carriers'. Sennder offers the bypassing of middlemen in the market and directly connecting shippers and carriers. It offers highly attractive financial conditions to both parties	'Sennder <b>shall be liable for all its services in accordance with the ADSp 2017</b> , insofar as these do not conflict with any mandatory statutory provisions. In the event that the ADSp 2017 do not apply in whole or in part to the provision of services by sennder, sennder <b>shall be liable as freight forwarder in accordance with Clause 23 ADSp 2017 explicitly deviating from the provisions of § 431 HGB'</b>
Catalogue	ChainGO Freight <a href="#">2022</a>	ChainGO Freight is blockchain-based software for freight transportation. It consists of an online collaborative platform to manage and control all information and documentation related to the logistics process [...] ChainGo offers complete analysis of the information on each operation, which is carried out with appropriate insights	'The company <b>will not be responsible, under no circumstance, of any damage caused, for example by mistakes or omissions, lack of responsibility of the site or virus contamination or malicious programs in its contents</b> , in spite of having taken all necessary technological measures to prevent it.'

Kołodziej, M. K., & Verheyen, W. (2025). Understanding the legal status of online logistics platforms in Europe: a decision framework for service providers improving legal certainty in the platform context. *Journal of Shipping and Trade*, 10(1), 9.

# Possible qualifications



# Impact qualification?

- **Licences/ access to the profession**
- **Platform contractual liability**
- **Insurance coverage**

# Licences/ access to the profession (Belgium)

Platforms are different? **NO!** → Platform is mere “infrastructure”

→ Qualification follows functionalities/ responsibilities

Functionalities/ responsibilities	License needed?
Pure market place/listings	Low risk
Data pipeline	
Matching platform	Yes in IWT: Broker licence
Transport organiser	Yes, for all transport operators: Licence of commissionaire
Principal	



Non-compliance: penal liability exposure + Risk of losing liability coverage

→ high risk for tech start ups in logistics sector

→ Risk of contamination other ecosystem actors (recourse gaps)

# Liability impact?

- **Strength & risks platform ecosystems: contracts in the network**
  - Expands contracting to unknown parties
  - Possible enhanced liability exposure due to
    - Insolvency
    - Fraudulent platform users
    - ...
  - **Trust as key requirement but also USP** for platforms in the ecosystem
    - Effective performance gatekeeper role (platform participation subject to f.ex. Insurance coverage, registration business registry,...)
    - Voluntary responsibility in case of ineffective gatekeeping.

# Liability Impact (2)

- **Liability gap = gap for ‘traditional’ CMNI liability.**
- **Compared to road transport, risk is more limited in IWT:**
  - Art. 29.2 CMR provides unlimited liability in case of wilful misconduct by agents, servants or any other persons engaged for the performance of the contract.
  - Fraudulent platform users picking up and stealing cargo, have been held to be persons engaged for the performance of the contract.
  - Hence in case of theft by platform-contracted fraudulent LSP, still the contractual carrier will be unlimited liable vis-à-vis the cargo interest.
- **Platform liability for ‘fraudulent’ users/ Insolvent users?**
  - Problem: gap functionalities  $\leftrightarrow$  agreed upon responsibilities
  - Problem 2: possible ineffective insurance coverage (see above)
  - BUT: Teleroute case (Fr.): a secured market place is under the essential obligation to validate provided information  $\leftrightarrow$  exonerated for essential obligation erodes essence from the contract  $\rightarrow$  liable!

# Mitigating the risk

- **Compliance by design**
- **Platforms:**
  - map functionalities/ responsibilities and ensure accurate licencing and insurance coverage
  - Compliance control of platform users as a possible USP (see also platform power: gatekeeper power)
- **Users:**
  - Evaluate functionalities and binding responsibilities + available assistance.
  - Evaluate available licences and insurance policies held by the platform and cross-check with platform functionalities and responsibilities.
- **Legislators/ sector organisations/ ...: develop from actor-based to goal-based regulation and policies, to avoid gaps due to “sui generis” platforms.**

# Sui generis platforms?

- “Sui generis platforms “typically combine functionalities attributable to different transport intermediaries.
- As such they are subject to the relevant licence obligation(s)
- Draft bill to create tech-neutrality and avoid evasion(BITO/Verheyen): expands licence obligation to ‘Transport organiser of goods’:

*any natural or legal person who, in return for remuneration, undertakes to perform legal acts in the field of transport of goods. These legal acts may be accompanied by ancillary material acts such as packaging, labelling, storage, or supplementary transport, without this affecting the qualification as a transport organiser of goods. Digital platforms that perform legal acts in the field of transport, or that present themselves as a medium for performing such legal acts and go beyond the neutral presentation and aggregation of information, are likewise qualified as transport organisers of goods.*

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# Platform strengths vs abuse of platform power

Platform power	Strength	risk
Legislative power	Bottom up harmonisation Market self-regulation	Market imbalances/ uneven risk distribution
Gatekeeper power	Strengthening trust in the ecosystem	Exclusive effects
Enforcement power	Private (online) dispute settlement	Independence/ impartiality
Economic power	Efficiency maximization Matching Data pipelines	Functionalities ↔ Responsibilities Cannibalism effect (cfr. Amazon/ Tradelens) Social dumping

**Platformisation is often put as a binary pro-contra question. However legal intervention can ensure strengths being affirmed while risks are excluded**

# Platform power risks vs mitigation factors

Platform power	risk	Mitigating factors
Legislative power	Market imbalances/ uneven risk distribution	Existing mandatory rules Traditional of intersectoral dialogue B2B unfair contract terms rules
Gatekeeper power	Exclusive effects	Potential risk ~cannibalism effect
Enforcement power	Independence/ impartiality	Platform-based claims handling efficiency vs. court based legal certainty~trust
Economic power	Functionalities ↔ Responsibilities Cannibalism effect (cfr. Amazon/ Tradelens) Social dumping	Problems on all 3 levels

# Platform power risks vs mitigation factors

Platform power	Strength	risk	Solution
Gatekeeper power	Strengthening trust in the ecosystem	Exclusive effects	Objective, open accession standards (certification, licencing, insurance coverage, no open invoices/ non-disputed claims) Potentially: two-sided rating
Enforcement power	Private (online) dispute settlement	Independence/ impartiality	Optional ADR/ODR mechanism/ Court appeal possible (see also ODR Guidelines council of Europe)
Economic power	Efficiency maximization Matching Data pipelines	Functionalities ↔ Responsibilities Cannibalism effect (cfr. Amazon/ Tradelens) Social dumping	Carefully review platform-ownership Neutral platform intersectoral OR Tech-driven platform with transparency obligations  Introduce social minimum in case of

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# Pathways for IWT in platform ecosystems

## 1. Regulatory obstacles

1. Review licencing requirements, eliminate gaps through goal-based regulation

## 2. Risk distribution

1. Ensure risk neutrality of platformization in IWT
2. Map and attribute risks in further contract chains
3. Provide effective insurance coverage

## 3. Power

1. Build on tradition of intersectoral dialogue
2. allow open access with objective transparent accession standards
3. Make ADR/ODR optional and/or allow for court appeal.
4. Review platform ownership & build social bottom in auction platforms

## 4. Trust

1. Result of A) effective exercise gatekeeper power and B) risk attribution strategies
2. In so far as economic and enforcement power are managed through (self)-regulation and/or intersectoral dialogue.



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# Shouldn't IWT take the wheel?

**Technology is infrastructure, the sector is the platform**