TRACK ACCESS CHARGES IN FREIGHT

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Eurostat: percentage of rail in total freight transport performance measured in tonne-kilometres, 2015

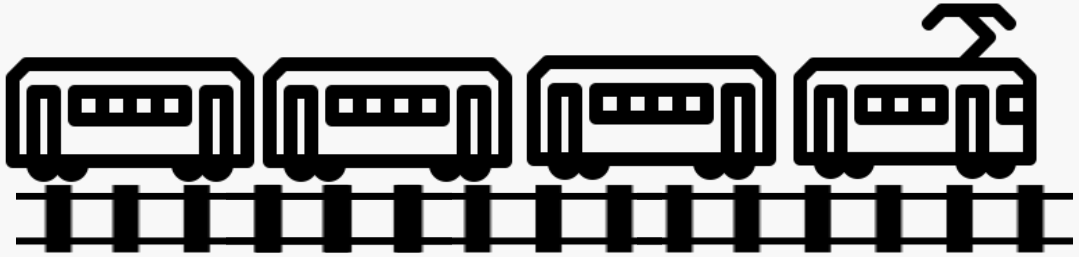
Background

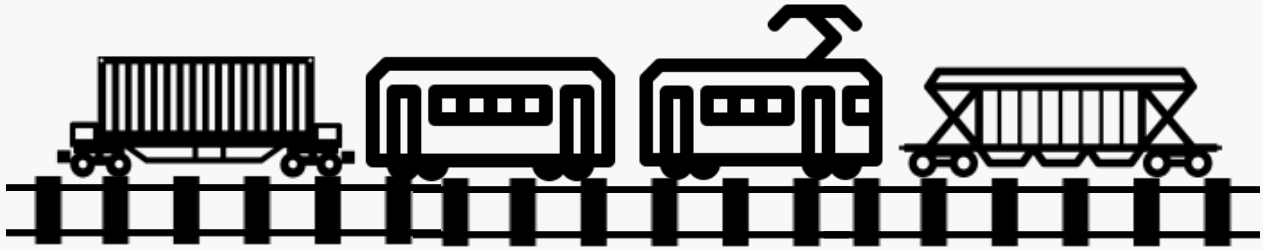
«to understand the predictable changes both in cost and in revenue structure when freight share rises and charging process faces consequent market imperfections»

Aim and Scope

Track access charges in freight

«the average cost of one-unit transportation is at its minimum and is equal to the cost that is directly incurred as a result of operating the railway service if the rail infrastructure has the same technological conditions within the whole network and it is equally and fully loaded with uniform trains»

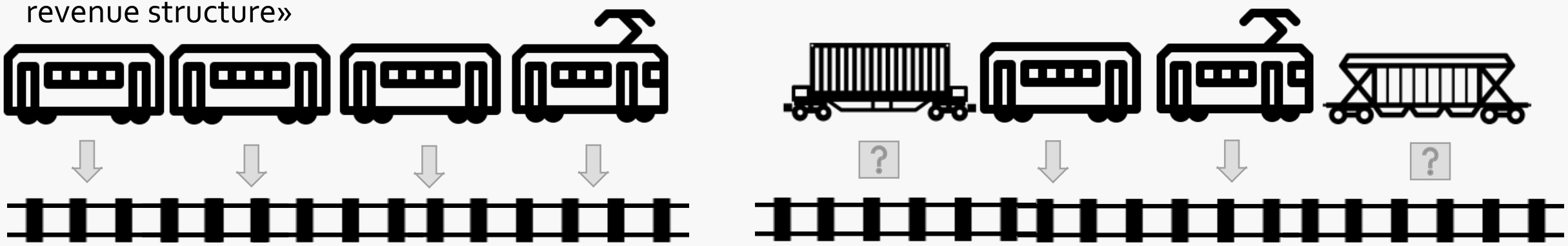




Technical features & Costs → Traffic volume & Revenues → Access conditions & Market imperfections → Political environment & Financing

Track access charges in freight

«freight can not be considered as marginal activity due differences in cost and revenue structure»



Technical features & Costs → Traffic volume & Revenues → Access conditions & Market imperfections → Political environment & Financing

Operational | Maintenance | Renewal | Development

Track access charges in freight: Technical features & Costs

«the big amount of *ad hoc* and reschedulled trains requires additional traffic management costs»

«charging and allocation processes require *big data* analysis»

Operational | Maintenance | Renewal | Development

Track access charges in freight: Technical features & Costs

«the *fixed* maintenance costs vary with the volume of traffic in a gradual manner:

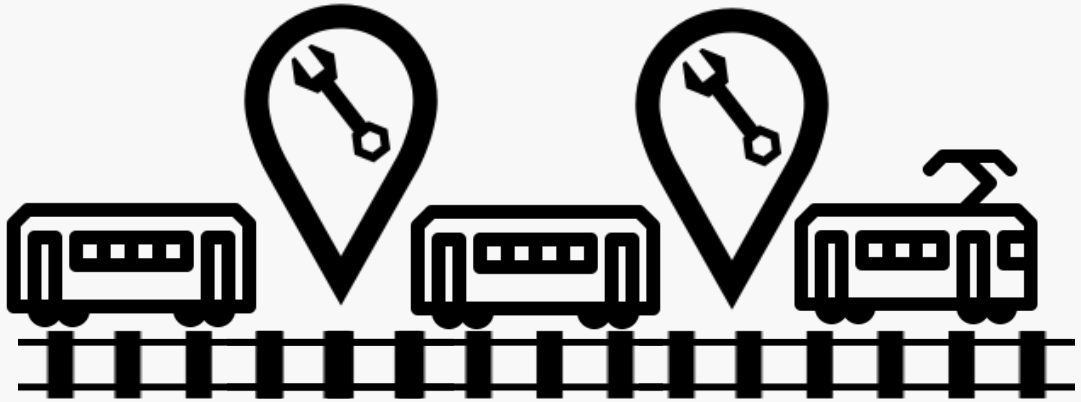
- unnoticeable costs with one ton km,
- maintenance mode changes with a couple of ton km»

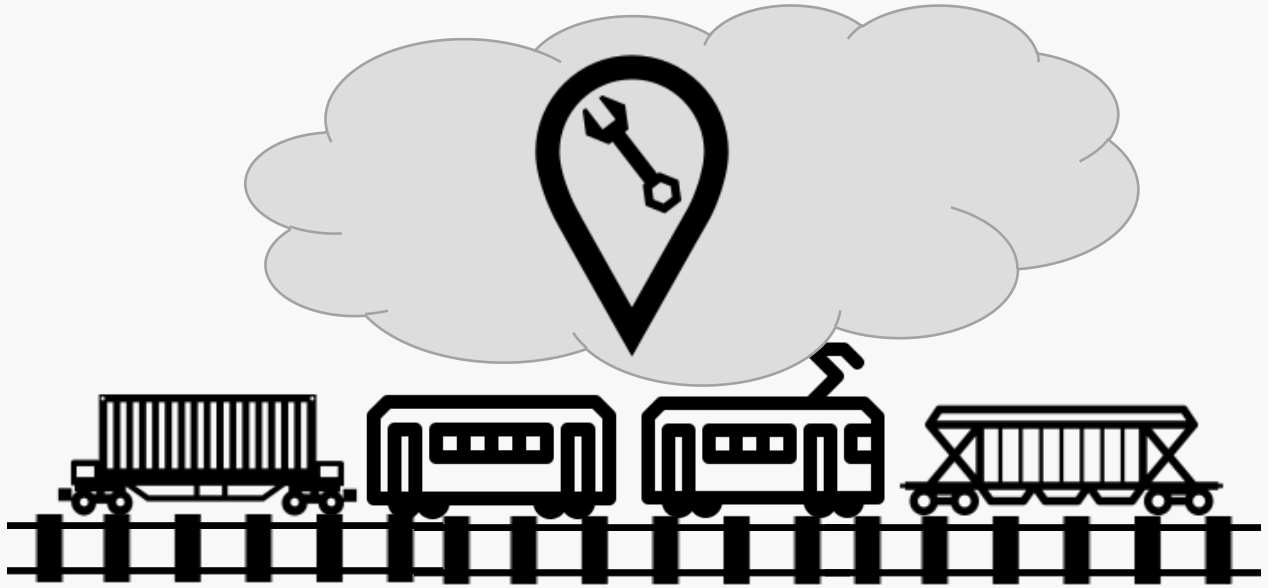
«depends on a precision of the forecasted traffic volume»

Operational | Maintenance | Renewal | Development

Track access charges in freight: Technical features & Costs

«not repaired degradation of one of the infrastructure elements leads to accelerated degradation of other system parts»



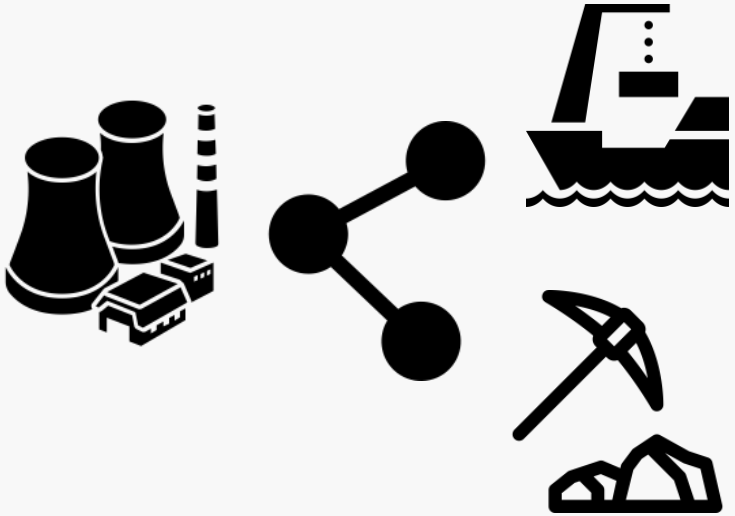


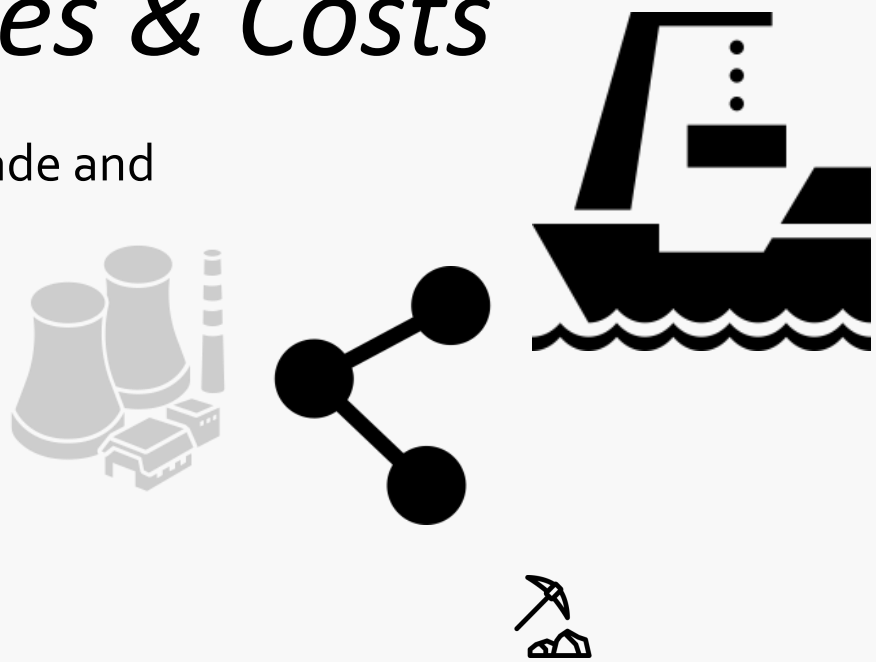
«in case of high traffic intensity the number of defects grows exponentially»

Operational | Maintenance | Renewal | Development

Track access charges in freight: Technical features & Costs

«places connected by rail appear, disappear; develop, degrade and change profile during rail lifetime»



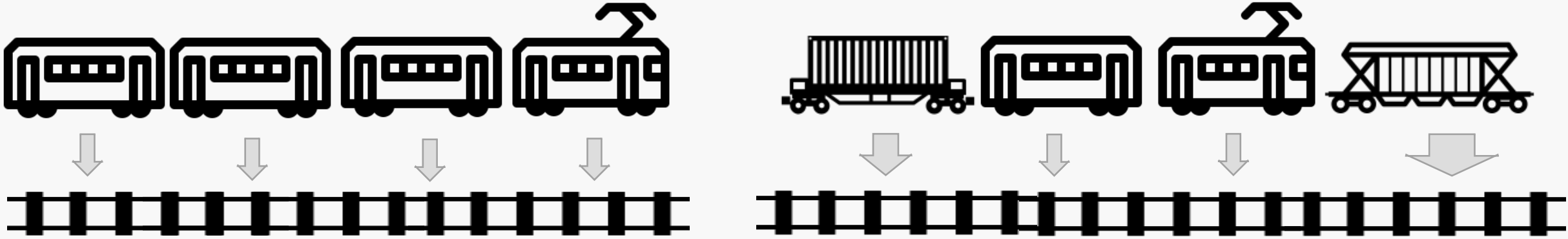


«maintenance costs are related to deviations from the ideal wheel-track exploration projected in development period»

Operational | Maintenance | Renewal | Development

Track access charges in freight

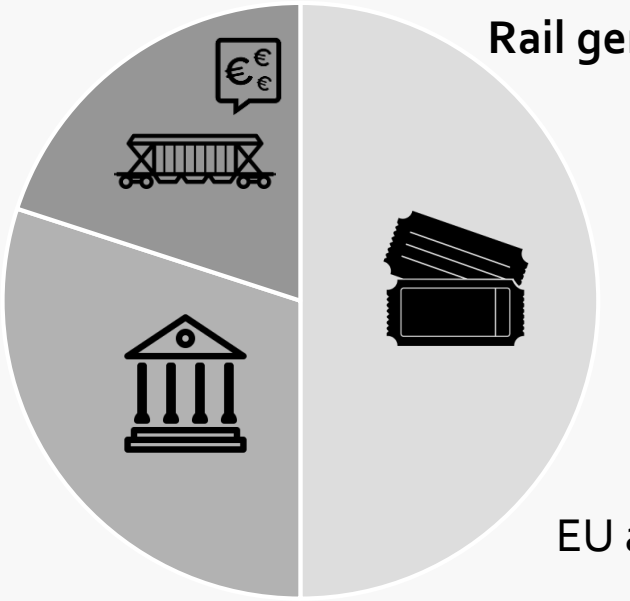
«requested deviations from the optimal usage of the EU rail network with primarily freight transportation leads to the distinction of market segments»



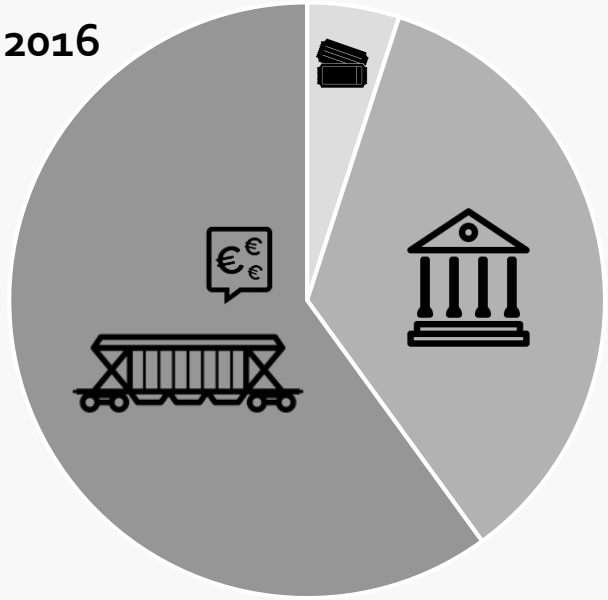
Technical features & Costs → Traffic volume & Revenues → Access conditions & Market imperfections → Political environment & Financing

Track access charges in freight

Rail generated revenues in 2016



EU average



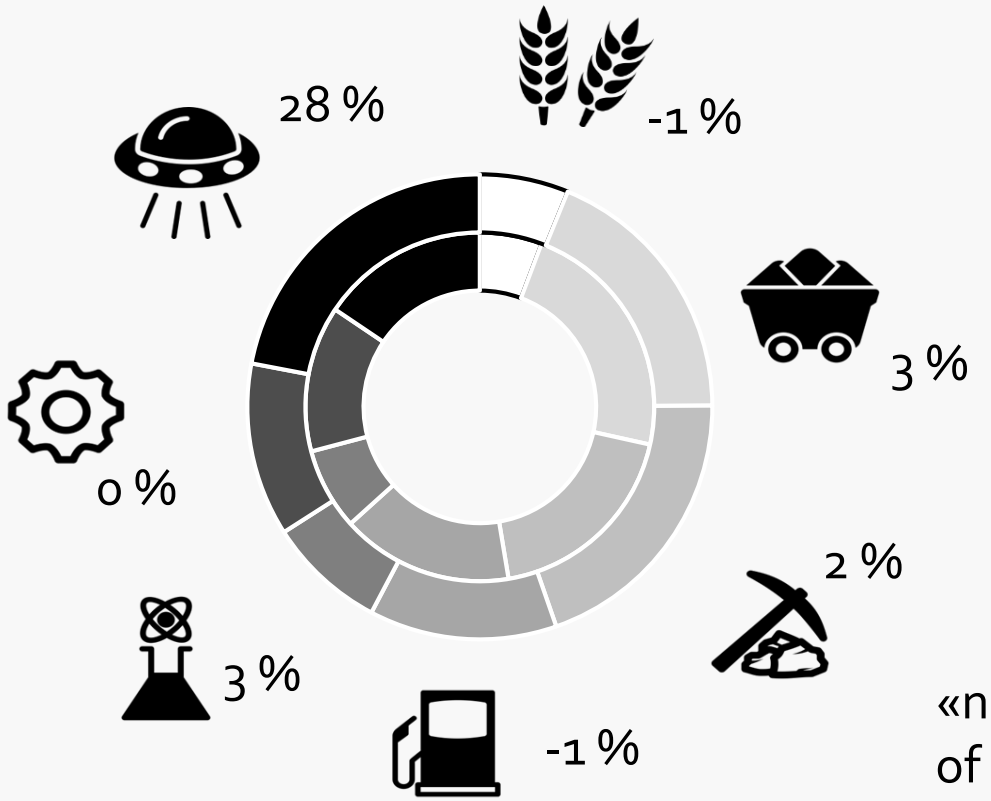
Latvia

Technical features & Costs → **Traffic volumes & Revenues** → Access conditions & Market imperfections → Political environment & Financing

Cargo structure | Charge level | Service level | Fluctuations

Track access charges in freight: Traffic volume & revenues

«the growing share of «unidentifiable goods» leads to the lack of understanding the market conditions»



«no dramatical changes in modal split of traditional cargo»

Cargo structure | Charge level | Service level | Fluctuations

Track access charges in freight: Traffic volume & revenues

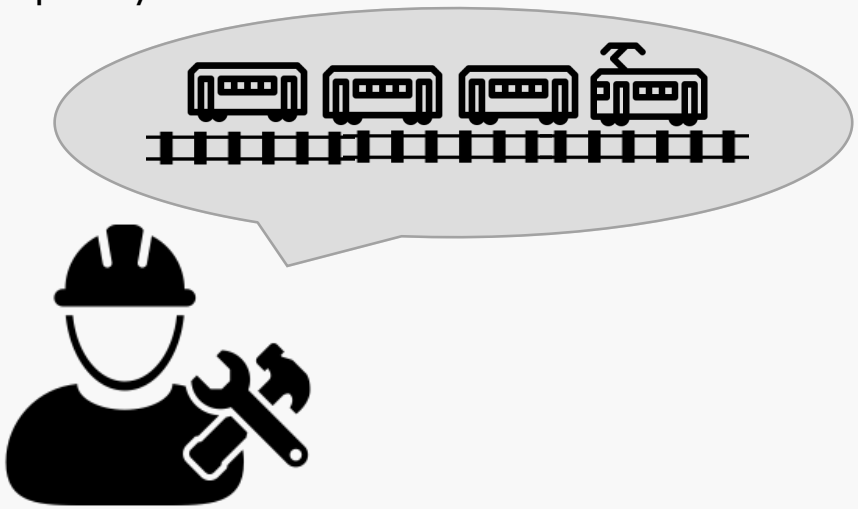
«the major trend in freight transportation is development of through rates on the "door to door" principle»

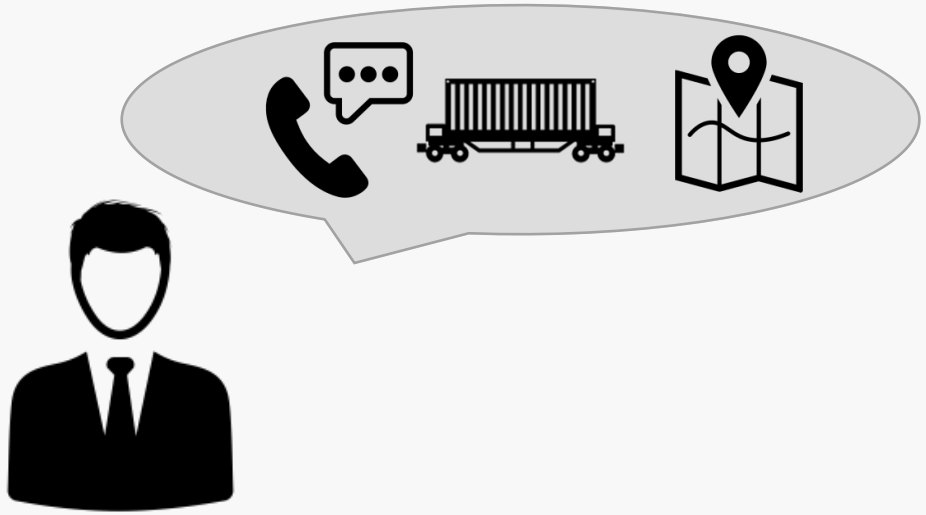
«factors that affect what a supply chain can pay have both external and internal origin»

Cargo structure | Charge level | Service level | Fluctuations

Track access charges in freight: Traffic volume & revenues

«the optimum competitiveness concept is fundamentally different to the optimal utilization of the network capacity»



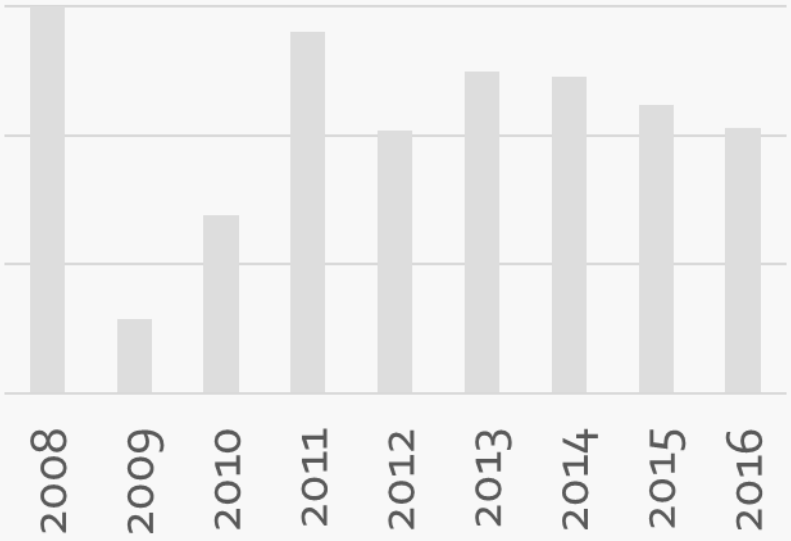


«the overall service level affects the overall value-added of the supply chain»

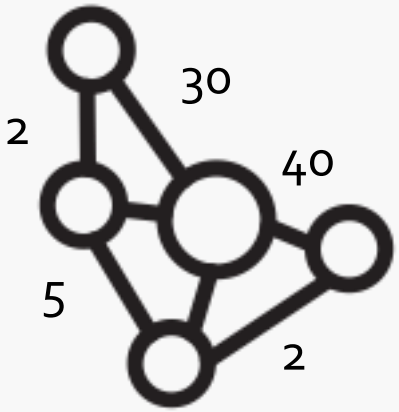
Cargo structure | Charge level | **Service level** | Fluctuations

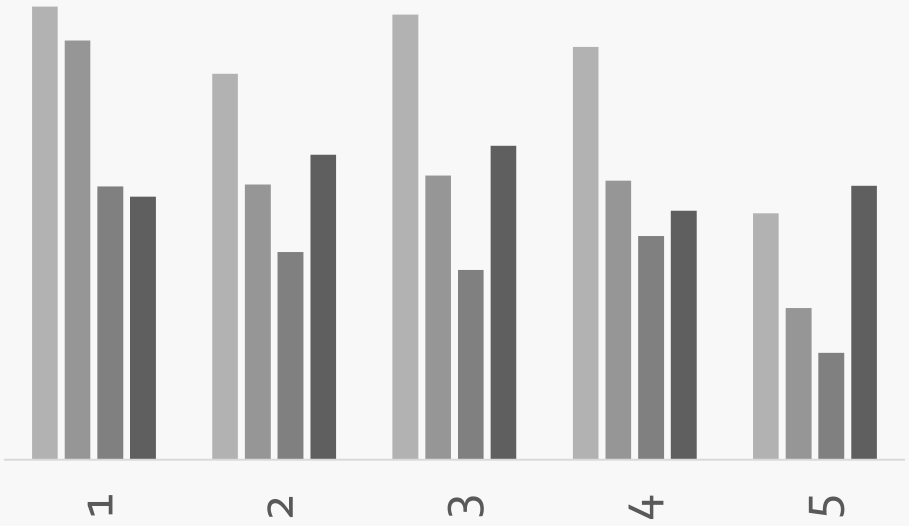
Track access charges in freight: Traffic volume & revenues

«the demand of rail infrastructure service has cyclical, seasonal and directional fluctuations»



goods transported by rail 2008-2016, t

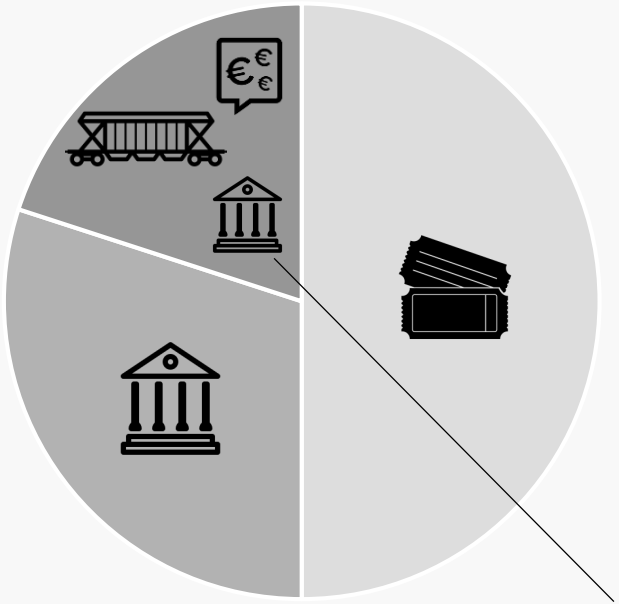




goods transported by rail in Latvia quarterly 2012-2016, t

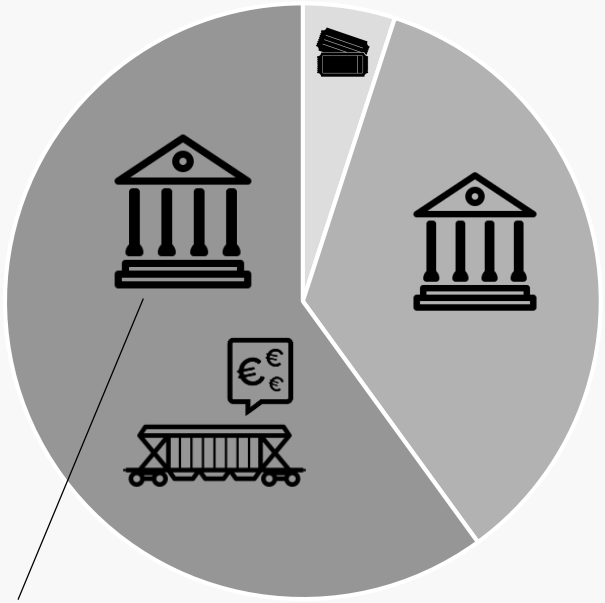
Cargo structure | Charge level | Service level | Fluctuations

Track access charges in freight



Restrictions to levy sufficient mark-ups:

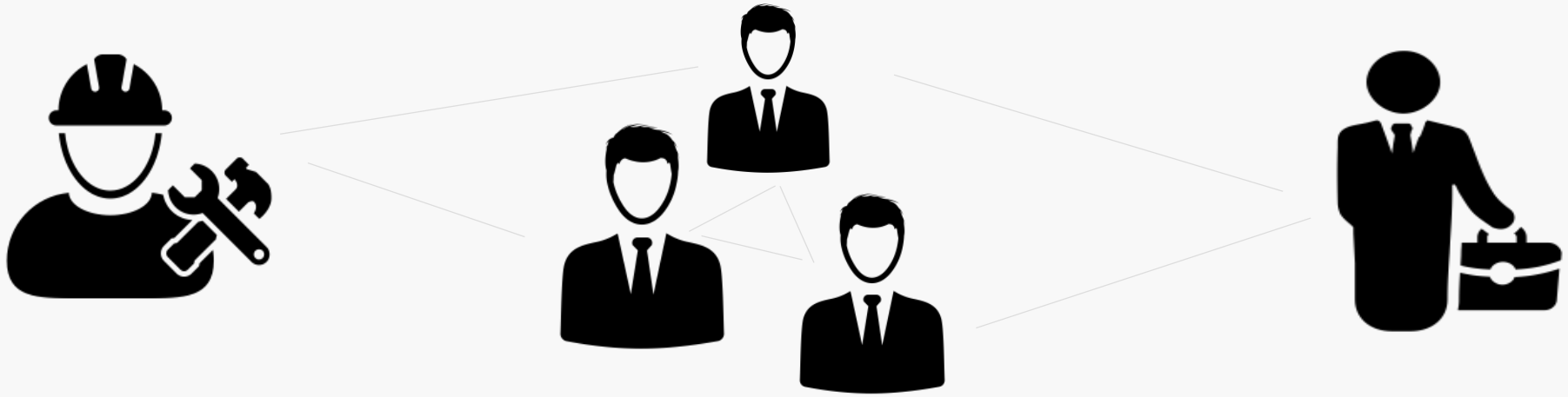
1. The tendency of «an unidentifiable transportation» is growing;
2. The «market can bear» ability depends on unpredictable external factors;
3. Distinct seasonal, cyclical and directional fluctuations



Bigger freight segment → more state funding

Technical features & Costs → **Traffic volume & Revenues** → Access conditions & Market imperfections → Political environment & Financing

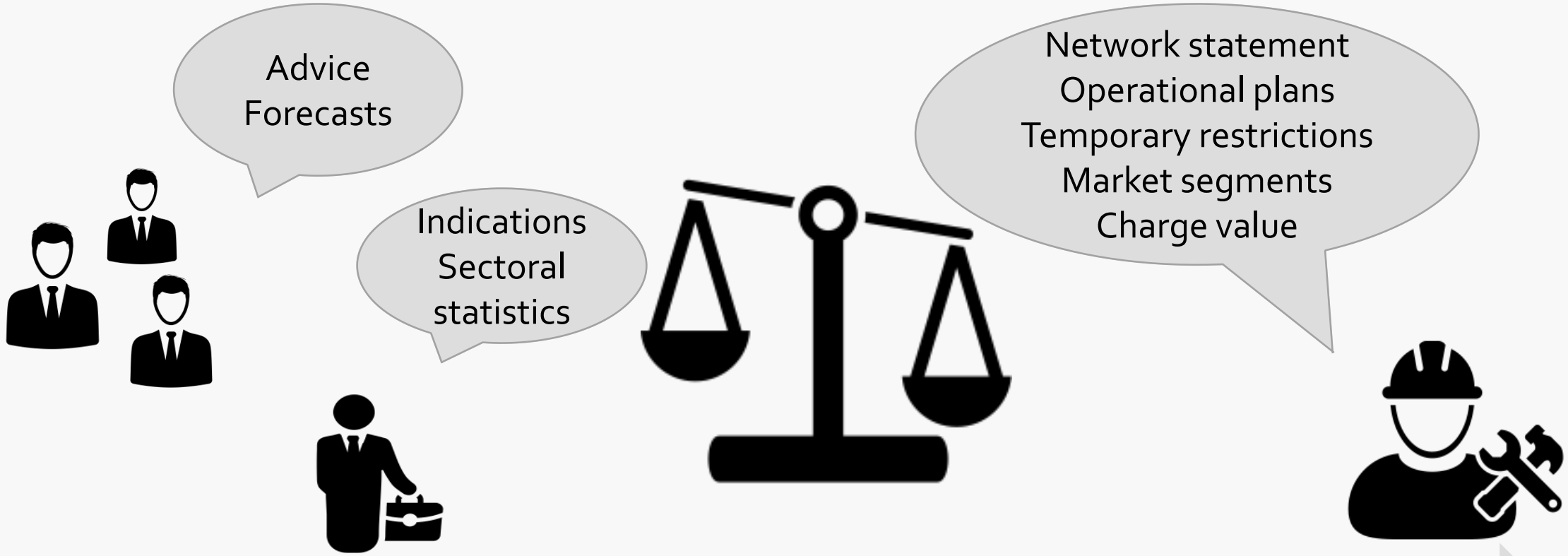
Track access charges in freight



Technical features & Costs → Traffic volumes & Revenues → Access conditions & Market imperfections → Political environment & Financing

Assymetric information | Lobbying | Monopolisation | Collusions

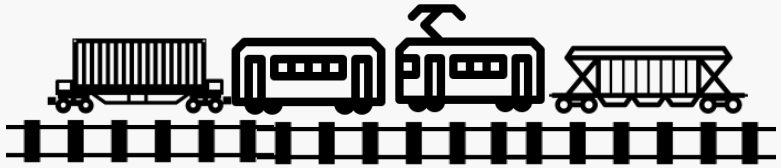
Track access charges in freight: Access conditions & Market imperfections



Assymmetric information | Lobbying | Monopolisation | Collusions

Track access charges in freight: Access conditions & Market imperfections

«no clear border between social and commercial benefits of rail transport»



«more and more additional legislation restrictions and obligations are required from IM»

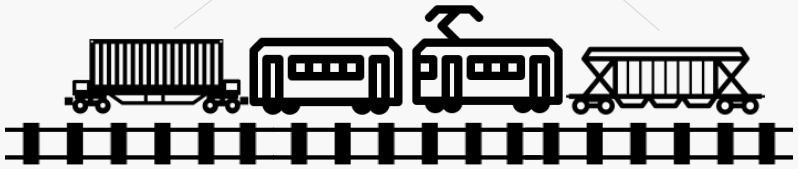
«society is not ready to accept payments for a very small group of freight rail undertakers»

Asymmetric information | Lobbying | Monopolisation | Collusions

Track access charges in freight: Access conditions & Market imperfections

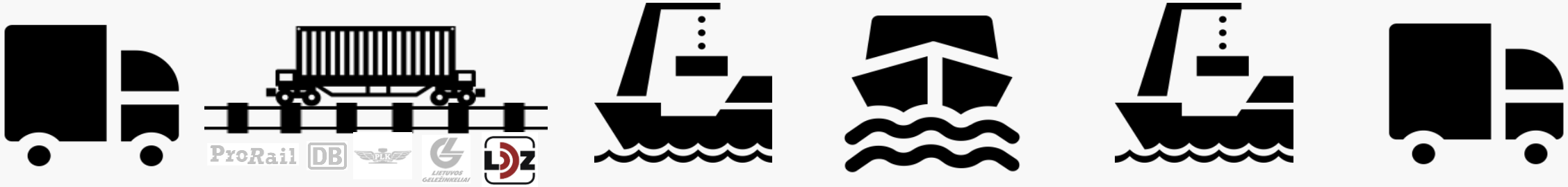
«large capital intensity and long terms of return of investment promotes monopolisation trend»

«the competitiveness has a destructive character in *a priori* small networks»



Assymmetric information | Lobbying | Monopolisation | Collusions

Track access charges in freight: Access conditions & Market imperfections

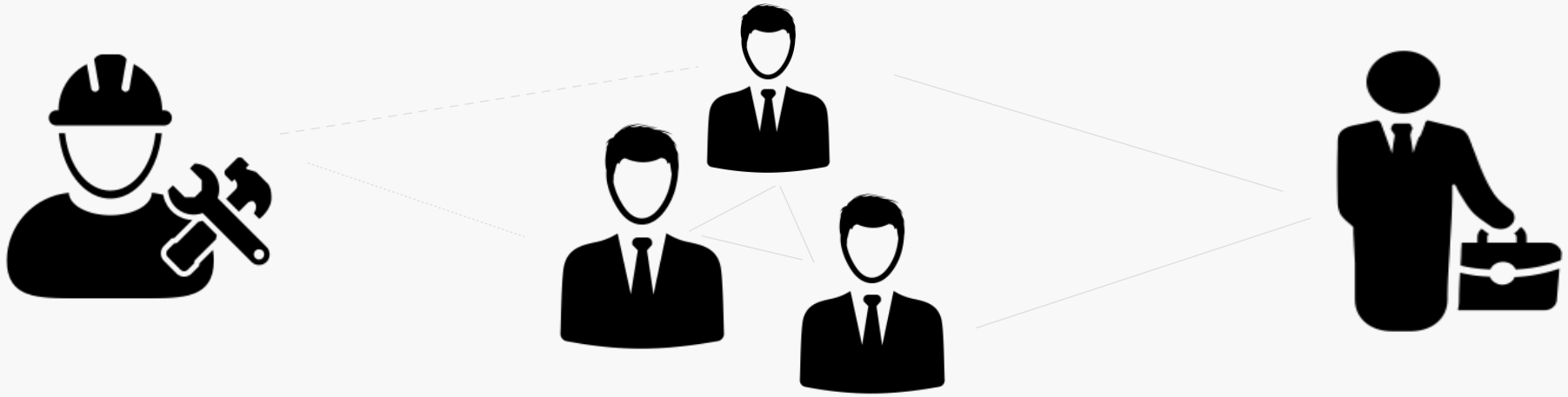


«the decrease of track access charge of one IM may result in :

- lower transport costs;
- markups of other IMs;
- surplus of logistic chain memeber(s)»

Assymetric information | Lobbying | Monopolisation | Collusions

Track access charges in freight



Technical features & Costs → Traffic volume & Revenues → Access conditions & Market imperfections → Political environment & Financing

Track access charges in freight

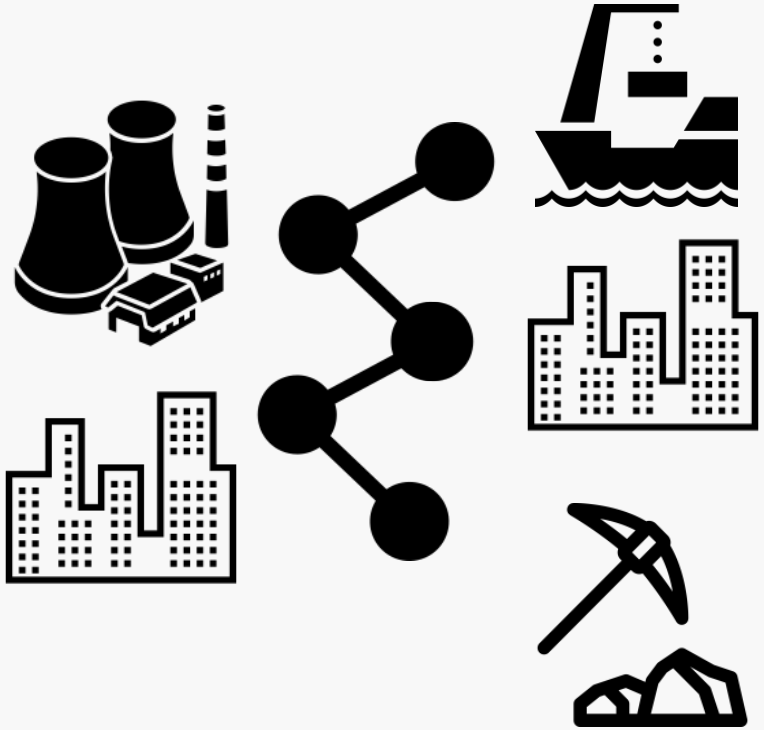
«there are pre-conditions for state financing of rail infrastructure on mixed traffic networks»

«there are also certain discrepancies within EU transport policy and national interests»

Technical features & Costs → Traffic volume & Revenues → Access conditions & Market imperfections → Political environment & Financing

National interests | Internal contradictions | Openness of economy | Funding priorities

Track access charges in freight: Political environment & Financing

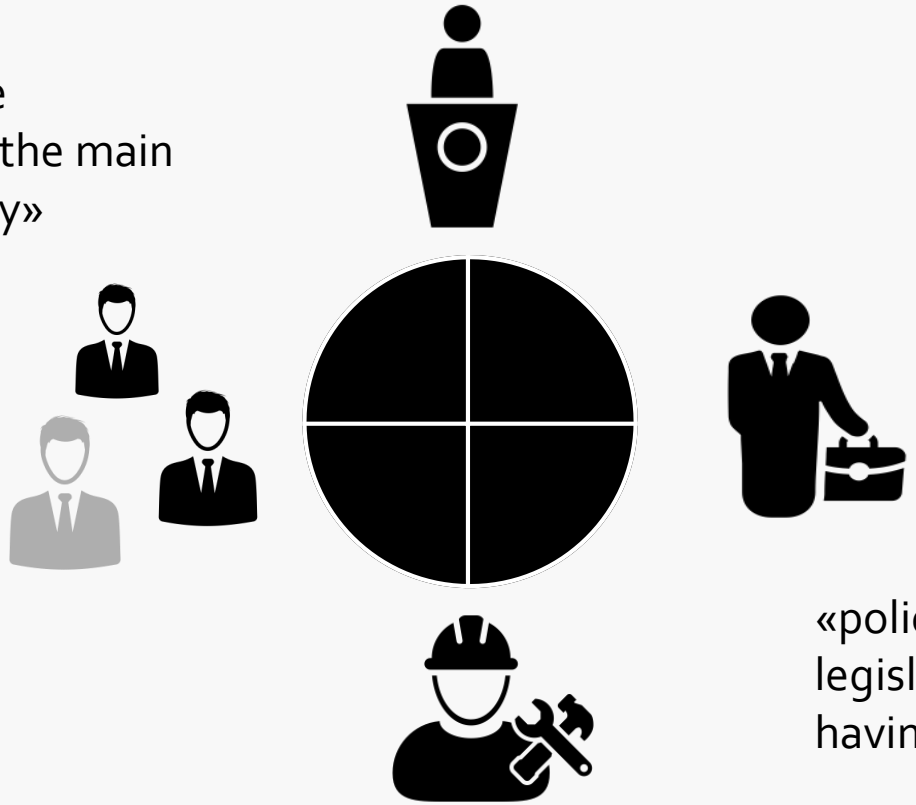


«if a state doesn't have big manufacture or inhabitant intensity, it is usually not interested in rail infrastructure, due to its rigidity»

National interests | Internal contradictions | Openness of economy | Funding priorities

Track access charges in freight: Political environment & Financing

«a state usually is the owner of the infrastructure, a policy maker and the main market stakeholder simultaneously»



«policy-makers are used to state legislative obligations, but avoid having financial obligations for this»

National interests | Internal contradictions | Openness of economy | Funding priorities

Track access charges in freight: Political environment & Financing

Trade (% of GDP) World Bank national accounts data, 2016

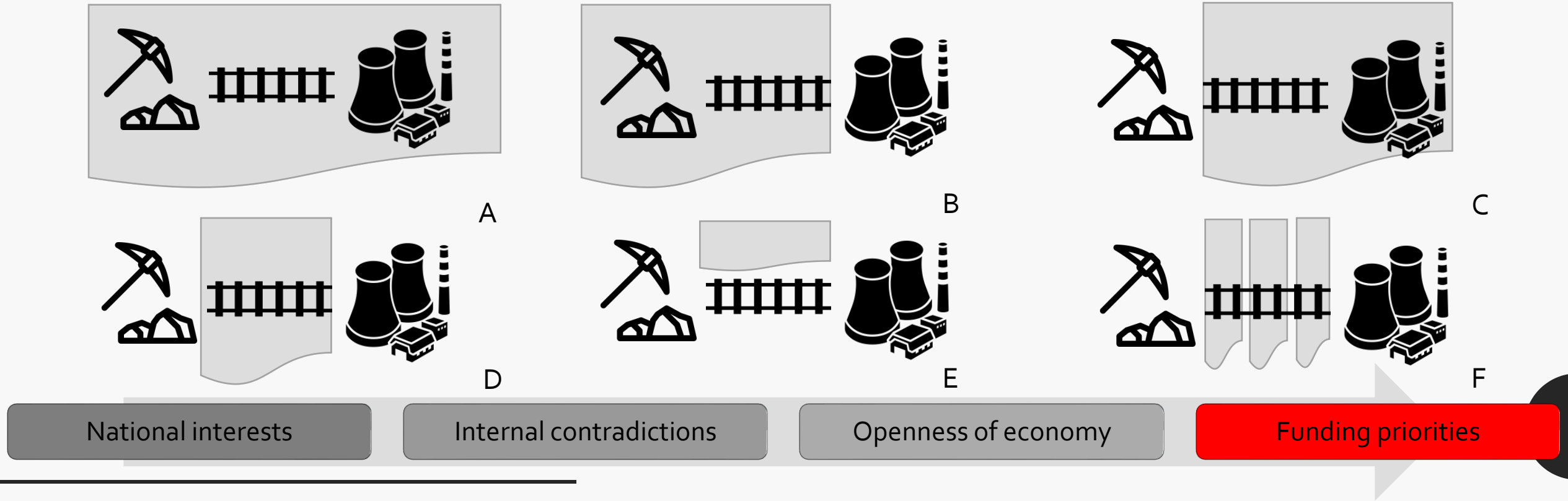
«states open to trade are interested in the development of transport corridors throughout their countries»

«multinational corridors depend on the decisions made by all participating countries – one tough monopolist and the corridor is not working!»

National interests | Internal contradictions | **Openness of economy** | Funding priorities

Track access charges in freight: Political environment & Financing

«there is a perception that the greater part of the traffic has foreign origin, the smaller part of the financing should have national public funding source» *Proost et al. (2011)*



Track access charges in freight

«the pre-conditions for state financing may contradict with national funding priorities»

«the consistent national transport policy should be oriented on:

- coordination among members of logistic chains;
- backing of non-price preferences of the rail infrastructure;
- security of investment opportunities»

Technical features & Costs → Traffic volume & Revenues → Access conditions & Market imperfections → Political environment & Financing

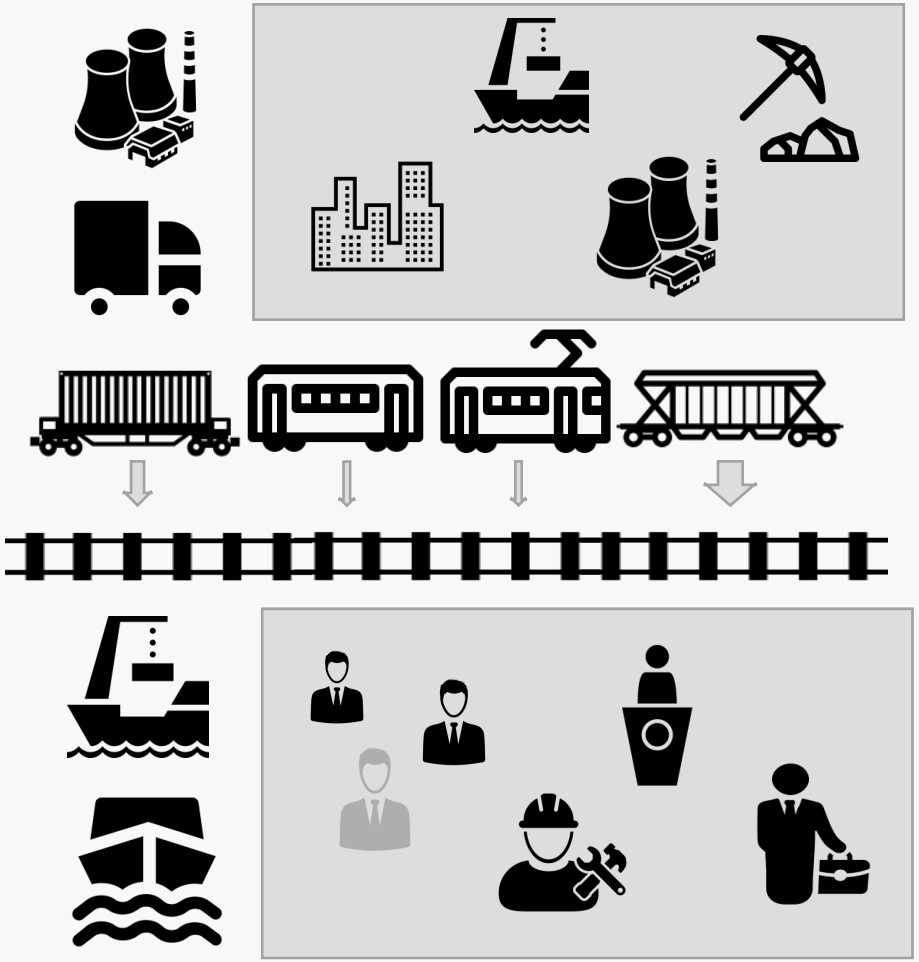
«the need of innovative solutions for charging process, incl. integration of information systems, increased database required for decision-making, enhanced level of cooperation with all the participants of the network»

«external factors play predominant role in ensuring competitiveness, therefore charging policy must be included in a common market plan and be congruent with overall transport policy»

«on this stage of market development, it seems that a state will be responsible both for social benefits of railways and for losses caused by initial unevenness of the network»

Conclusions

- the distinction of freight and passenger cost base;
- introducing three-dimensional valuation of mark-ups;
- introducing «integrated proposal» charging instrument;
- collegial institution to improve collaboration between participants of the logistics chain;



Latvian experience