

Public Transport Organisation in Germany

Contract awarding and management



Transit Alliance and Contract-based Transit Service

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Agenda

Contracting in Public Transport

1. Fundamental questions

2. Awarding PT contracts

3. Managing PT contracts

Fundamental questions

Contract obligation and tendering principle

European Regulation requires

- conclusion of a *Public Service Contract* and
- in principle its *competitive awarding*, but with direct award exceptions

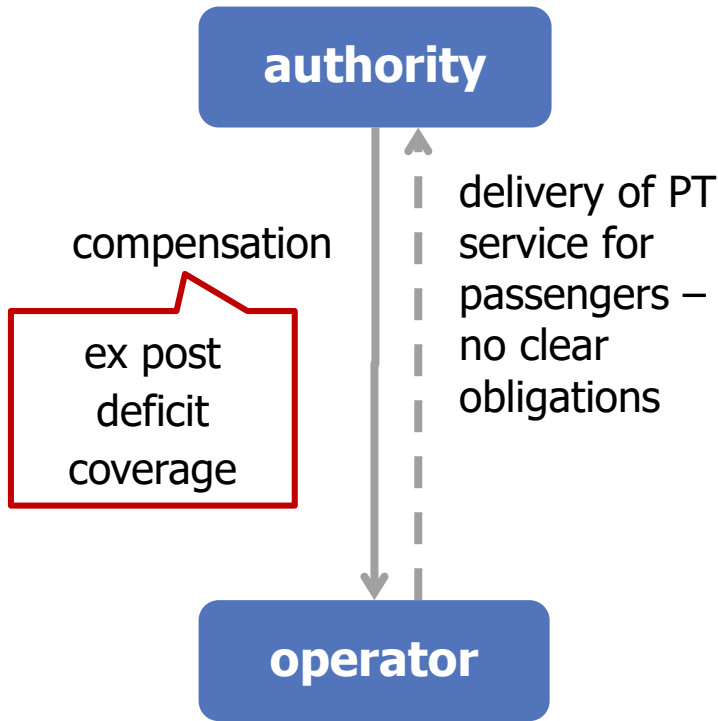
In Europe and Germany increasingly commercial companies competing for tendered services with financial compensation

City Transportation still mainly by direct award to municipal operator

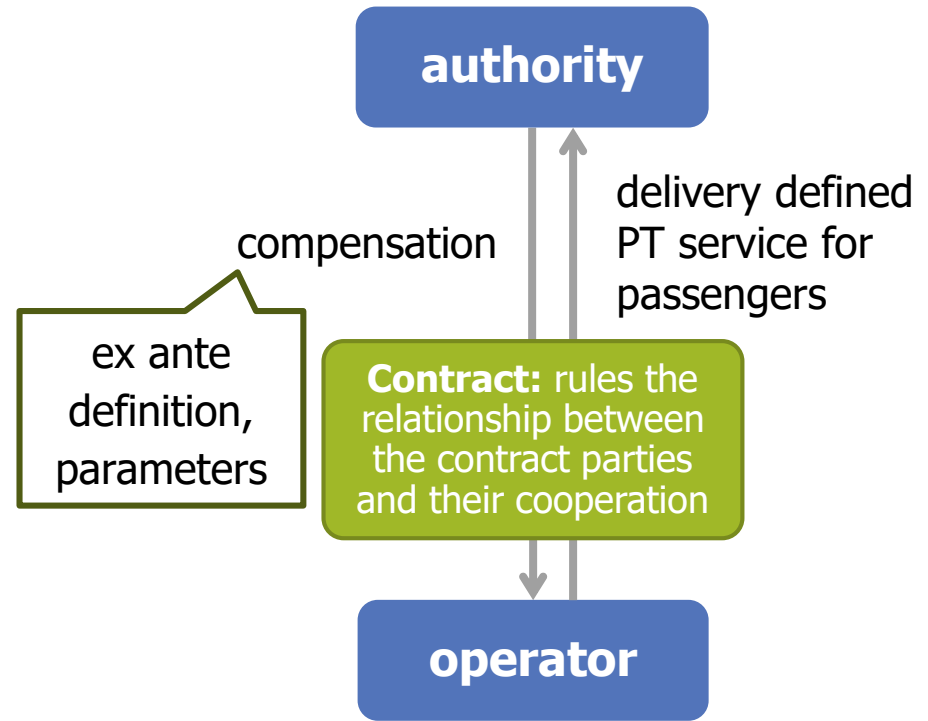
Fundamental questions

Public Service Contract – Basic Principle

former PT financing



contractual financing



Efficient and transparent spending of tax payers money
Clear mutual obligations / rights PTA and operator

Fundamental questions

Important issues at the start of contract design

To achieve a good contract in the end, start off contract design by clearing aims and other fundamental issues!

- **Aims:** What shall be achieved?
- **Scope** of the services to be delivered?
 - Operations / provision of infrastructure / vehicles
 - Modes: suburban rail, metro, tram, bus, ...
- Appropriate **allocation of competences and duties?** Operator merely carrier or also PT management / coordination tasks?
- Which partner can / shall bear which **risk?**
 - Investment and financing costs – vehicles, infrastructure
 - Operational costs – personnel, fuel/energy, ...
 - Revenue risks – gross und net cost contracts
- **Contract duration** – dep. on modes, assets, planning (un)-certainties

substantial impact on service obligations and monitoring!

Fundamental questions

Typical policy aims related to public transport

Transport policy

- Ensure mobility
- Increase market share of public transport within the intermodal market
- Link individual with public transport
- Enhance total transport situation
- Traffic safety
- Reduce mobility costs

Social policy

- People with limited mobility
- People with low incomes
- Young and elderly
- Pupils, students and apprentices
- Accessibility for all sections/ generations of the population
- Employees of the operator

Environmental policy

- Reduce emission of pollutants, e.g. reduction of global warming gas emissions
- Noise reduction
- Quality of life in urban areas
- Protection of vulnerable rural areas
- Efficient energy use
- space consumption

Structural/ economic policy

- Land-use policy
- Site-related factors
- Regional structure
- Location trends
- Support for small and medium sized enterprises
- Infrastructure policy; establishing capacities, regulations for use and financing the public transport infrastructure

Budgetary aspects

- Amount of money spent by the PTA on PT
- Possibly savings in other sectors, e.g. avoidance of roads and parking facilities
- Incentives to increase efficiency
- Willingness / possibility to bear financial risk by the authority

Source: Based on Inno-V, KCW et al (2008): Contracting in urban public transport, page 46.

Fundamental questions

Scope of the contract

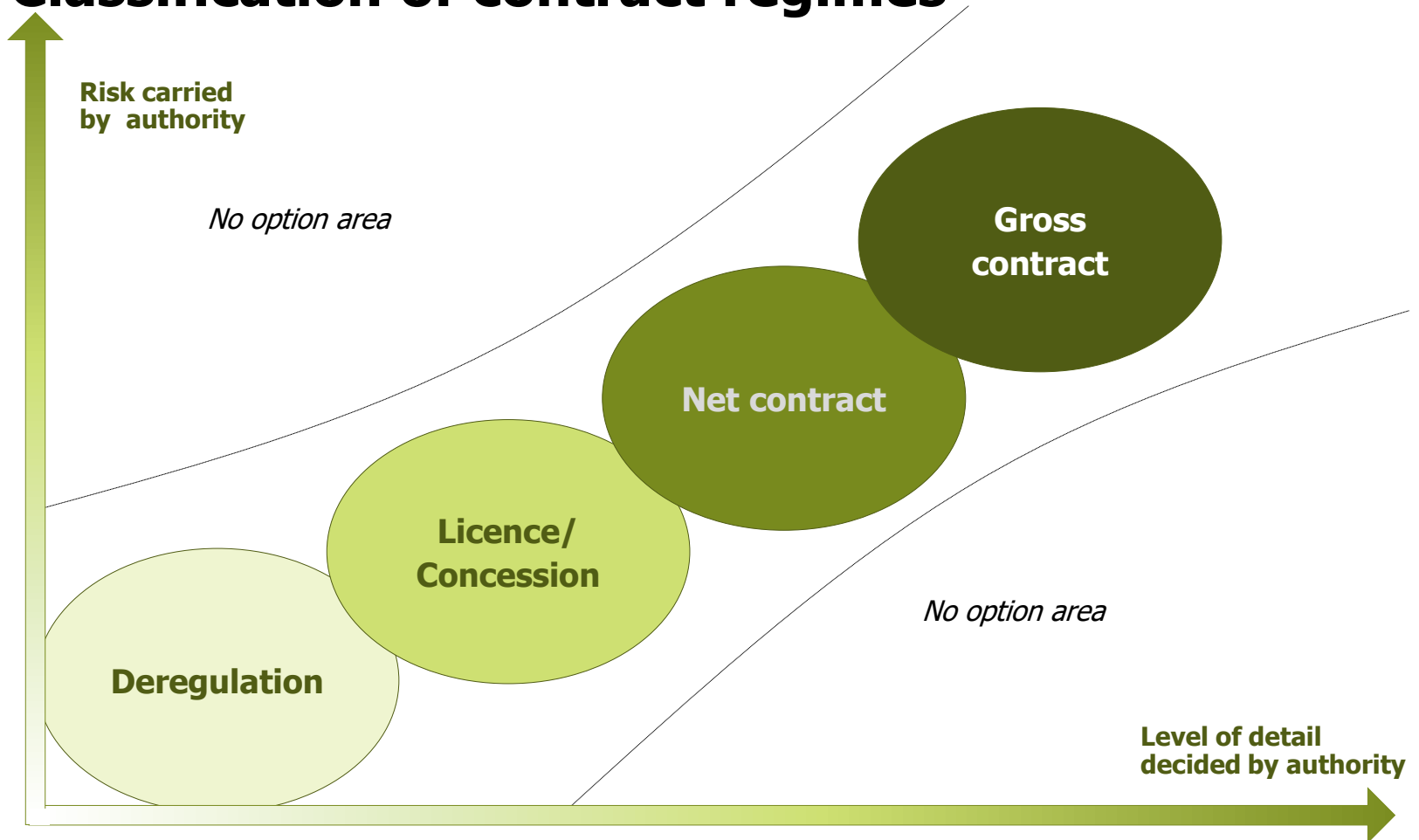
	Bus	Tram	Metro
Operations	<p>Germany & Europe: numerous models & variations; need for further development especially regarding infrastructure provision / maintenance</p>		
Vehicles			
Infrastructure			
...			

Exemplary considerations

- Combine modes in 1 contract (licence) if operator shall have PT management competencies and carry revenue risks
- Separate bus networks from rail (and split into subnetworks) if competitive pressure in operations tendering is wanted
- Natural monopoly rail infrastructure shall be separated from rail operations tenders
- Separating vehicle provision from operations increases competitive pressure, but also leads to more interfaces and complexity

Fundamental questions

Classification of contract regimes



Source: Ringqvist, Stenerik (2010): „The Swedish Experience“. Presentation. Six months experience of the PSO regulation. UITP Conference. Paris, 7 June 2010; adapted.

Fundamental questions

Who should be responsible for which tasks?

	Foshan City	District Transport Community	PT operator
Setting of PT objectives and targets			
Design of PT network and routes			
Setting the requirements concerning...			
... service hours and service frequencies			
... the vehicle/fleet quality			
... service reliability/punctuality			
... friendliness of the staff			
Timetables			
Setting the fare structure and level			
Setting the sales structures			
Information/Communication			
Operation of the services			

Categories e.g.:

- Decision, advice, coordination, participation/discussion, ...
- Basic standards vs. elaborations

Fundamental questions

Risk allocation – production costs

In principle, the operator shall carry production cost risks

But: Price adjustment if relevant input factors change, e.g.:

- Fixed price per timetable km or hr, adaptation in line with labour and fuel costs development (e.g. national or province indices)
- Annual adjustment of price [¥ / timetable km] or [¥ / timetable hr] according to calculation sheet (as delivered with the offer)

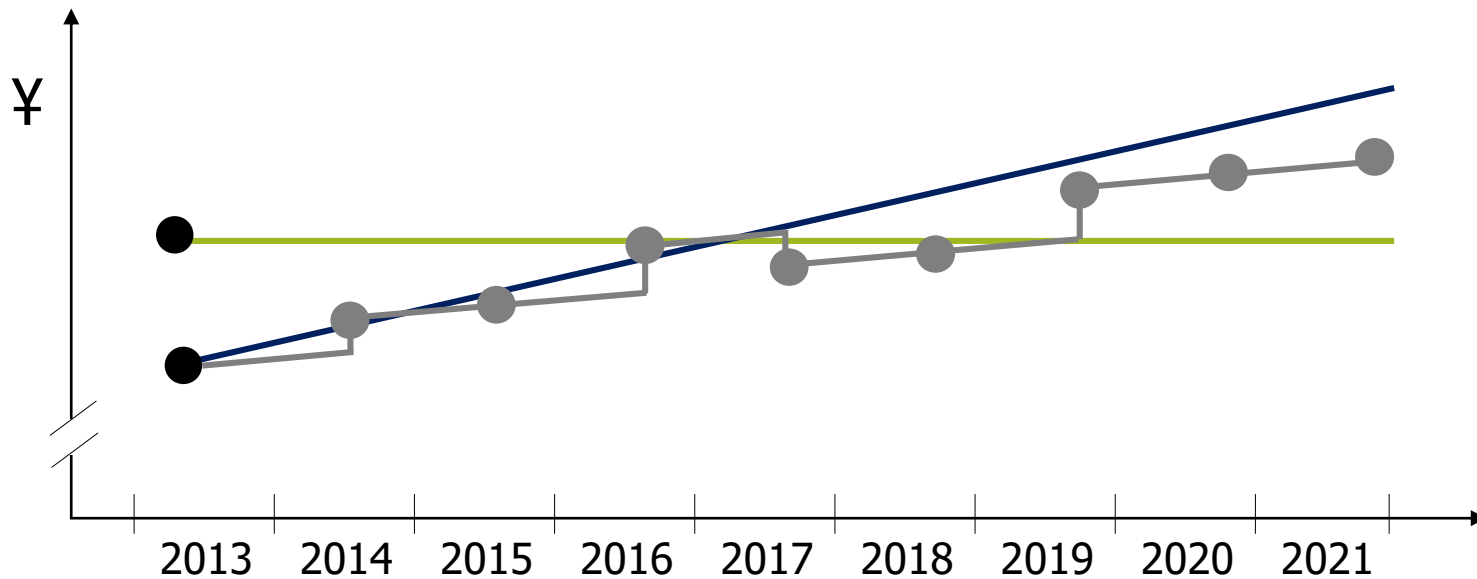
Only external influences shall lead to price adjustments!

And: PTA may decide to take over further risks if they are considered to be too high / too uncertain for operators

- reduction of risk premium
- stimulating the number of competing operators

Fundamental questions

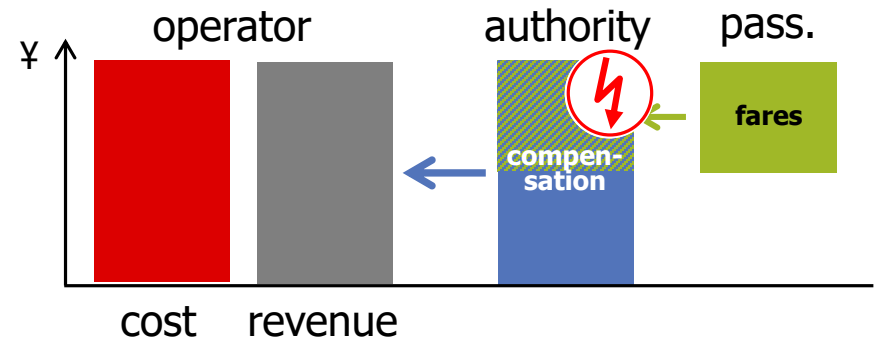
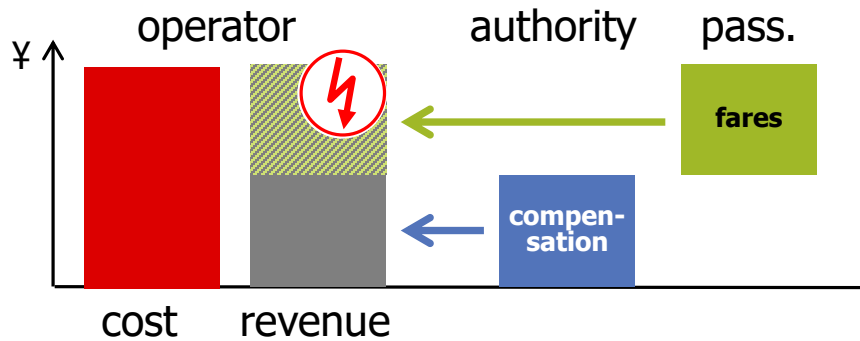
Some basic options for price adjustments



- 1** constant budget for contract term
- 2** increasing budget for contract term based on calculation (e.g. 1% per year; includes risk premium)
- 3** flexible budget = constant basic budget plus price adjustment for certain input factors (e.g. fuel)

Fundamental questions

Revenue risk - Net vs. Gross Cost Contract



Net Cost Contract

Costs are covered by

- Fare revenue and
- Contractual payment

revenue risk borne by transport operator

Gross Cost Contract

Costs are covered by

- Contractual payment

revenue risk borne by authority

Fundamental questions

Net cost contracts - prerequisites

Prerequisites for a (well functioning) net cost contract

- High passenger / revenue potential
- Reliable long term transport policy and PT supply strategy
- Calculability of external influences (e.g. inhabitants Foshan and surroundings, factory areas and working places)
- Overall network or big subnetwork, demand mainly independent of other (sub)networks
- Long contract duration
- Tariff development defined in advance (or at least agreements on revenue effects of fare changes; elasticity → next slide)
- Fair, transparent and fast revenue distribution (→ presentation „Transport Associations“)

Fundamental questions

Net cost contracts – Advantages, drawbacks

+

- Market incentive for operator initiative, good services and quality
- „Lean“ quality management

-

- Prerequisites (see previous slide) hardly ever fulfillable
- If fulfilled for the most part, major operator risks remain
 - high risk premium
 - high market entry barrier



Appealing in principle but major drawbacks in practice
Observation: general plead of PT companies for revenue responsibility, but lower participation in net cost tenders

Fundamental questions

Contract design: options to describe PT services

Functional

Specification of the service output

Intermediate

Minimum standards and supporting guidelines

Constructive

Detailed specification of the service input

Examples:

Purely functional	Functional elements (intermediate)	Purely constructive
Maximum travel time of 15 minutes from a bus stop to the city centre (within a densely populated area)	There has to be a direct service from the central station to the Exhibition Ground.	Line A leaves from the central station via [list of all stops] for the Exhibition Ground.
90% of the stations in the central district have to offer departures at least every half hour.	Buses have to be operated every 20 minutes during off-peak-periods (Monday to Friday).	The first departure from the central station (Monday to Friday) is at 5:05, the second at 05:25 ...
The waiting period at the central station shall not exceed 15 minutes for 80% of the passengers.	There has to be a seat for every passenger with a travel time exceeding 15 minutes. There are the following capacity restrictions: ...	The line has to be operated with low-floor articulated 4-door buses with a minimum of 63 seats.
75% of all passengers have to be satisfied with the cleanliness of the buses.	The vehicles are clean at the start of the line. Solid waste has to be removed at the end of the line.	Vehicles have to be cleaned daily. Solid waste has to be removed at the line end.

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Awarding PT contracts

Market entry – Reg. EC 1370 and German PT law

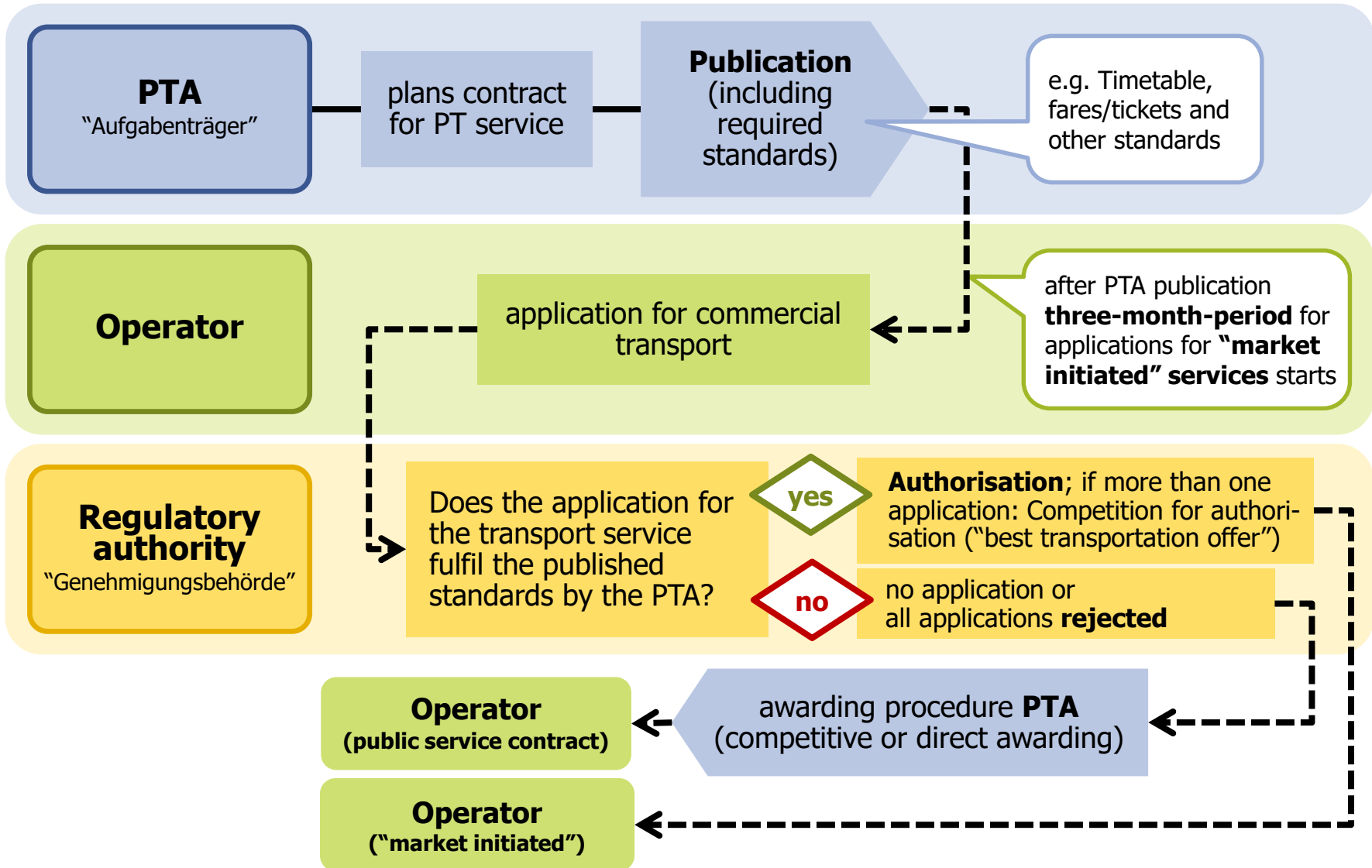
Authority initiative vs. market initiative

- Market entry depends on **authorisation** and, if financial compensation is necessary, on the award of a **contract***
- **Two different public authorities** are responsible:
 - the **regulatory authority** (“Genehmigungsbehörde”) for authorisation
 - the **public transport authority** (PTA, “Aufgabenträger”) for financing / contracting
- Market initiative is priority: The new German PT law (“PBefG”) defines clear processes for the interaction of the authorities and operators regarding authorisation and contracting (see next slide)
- The authorisation results in a **de facto-exclusive right**

* One exemption according to Reg. EC 1370/2007: general obligations regarding tariff don't require a contract.

Awarding PT contracts

Authority and operator initiated PT service



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- 1. Development during contract lifetime**
2. Performance monitoring and incentives

Managing PT contracts

Development during the contract

Some reasons for service changes during contract lifetime

- Demography, settlement structures ...
- Changes in travel patterns, passenger needs
- Budgetary constraints
- ...

Service changes might be legitimate only if the contract design allows such changes!

Implementation of changes, discussion of changes, potentially adaptation of service level, quality standards, financial consequences

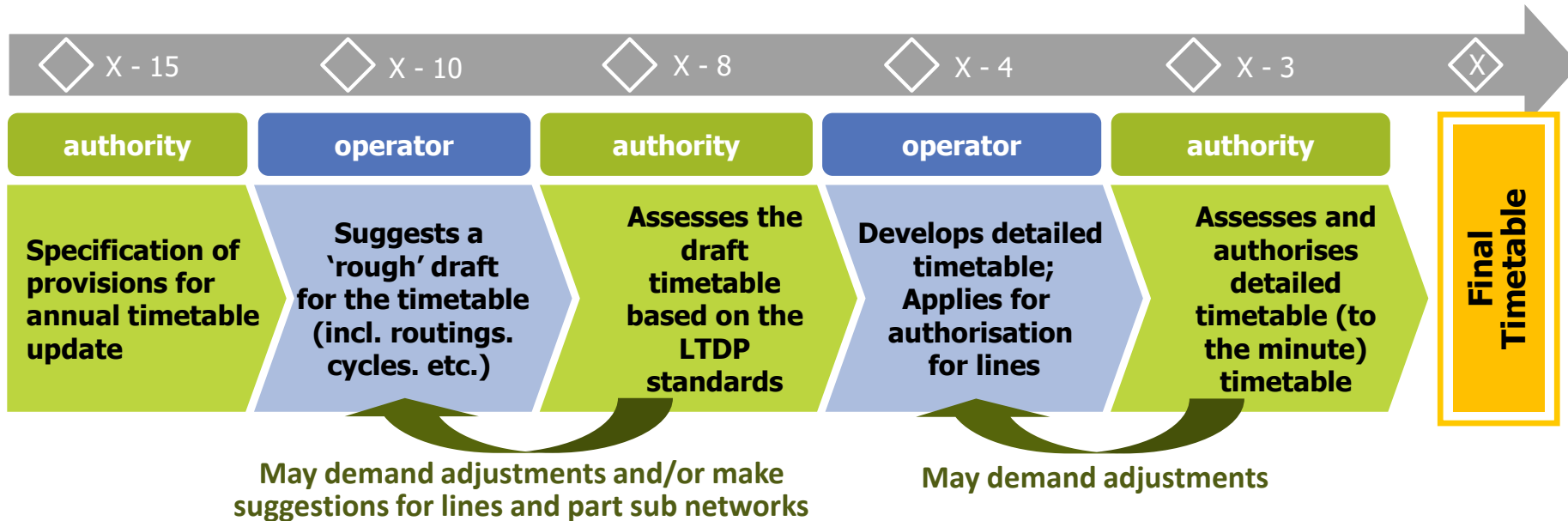
Discussion regarding market development (and regarding appropriate reactions)

(one of several processes determined in the contract)

Managing PT contracts

Example Berlin – Annual timetable update

- PTA SenStadtUm defines adjusted framework specifications for the timetable (eg. service frequencies, service times, line configurations) consistent with PSO contract
- Municipal transport operator BVG suggests a 'rough' time-table draft for every line
- SenStadtUm assesses the drafted timetable based on local transport plans standards
- BVG develops a detailed timetable and applies for the authorisation of the timetable
- SenStadtUm assesses and authorises the detailed timetable



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1. Development during contract lifetime

2. Performance monitoring and incentives

Managing PT contracts

Service monitoring/quality incentives necessity



The performance of the operator must comply with the stipulations of the contract.

No / bad performance shall not be economically beneficial for the operator → appropriate financial incentives

- 'Hard' service provision (reliability, punctuality, technical standards)
- 'Soft' service quality (e.g. cleanliness, service quality, staff behaviour, driving style)

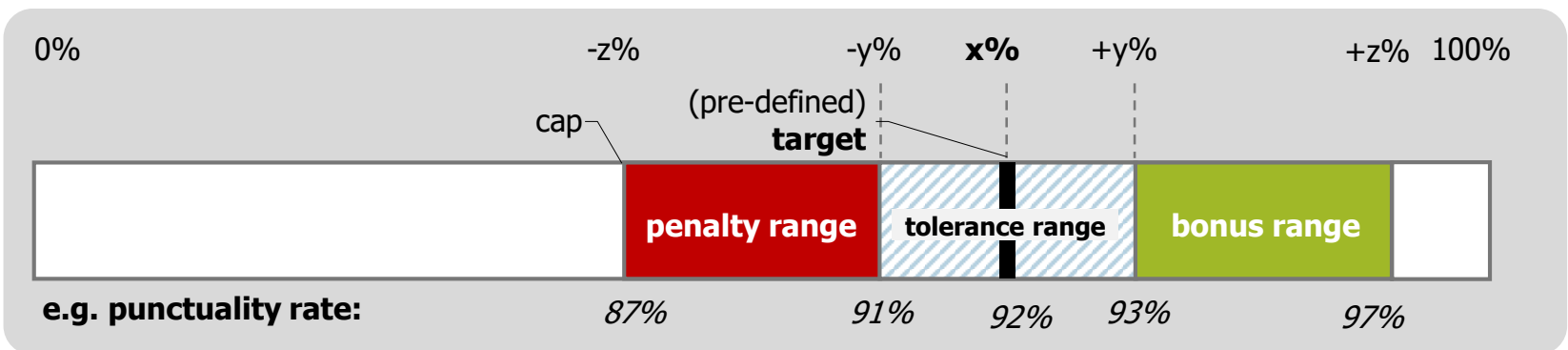
**Monitoring, reporting,
enforcement measures,
financial incentives**

Managing PT contracts

Quality measurement, bonus/penalty system

Controlling of transport performance and quality:

- Operator reports regularly on delivered transport services and achieved qualities
- PTA: completeness / plausibility & sample checks, (access to raw data)
- After final controlling / approval: exact determination of compensation payments



- (Pre-defined) target: Desired status/result/quality of services
- Tolerance range: Deviations (positive/negative) from the target without bonus or penalty
- 'Bonus range': A service provision above the tolerance range results in a bonus payment
- 'Penalty range': A service provision under the tolerance range results in a penalty
- cap: Negative deviations beyond z% are not accepted; further contractual penalties, ultimately premature termination

Managing PT contracts

Key indicators – example BVG contract (Berlin) 1

Service Level (p.a.)	Quality Level
<ul style="list-style-type: none">• U-Bahn: 20,44 Mio. Train-km• Tram: 20,10 Mio. Train-km• Bus 88,64 Mio. Vehicle-km Ferry: 18.366 Operating hours	<ul style="list-style-type: none">• Quality criteria, e.g. regularity, punctuality, connections• Definition for each criteria• Target values for each criteria
Compensation Payments (p.a.)	Controlling
<ul style="list-style-type: none">• 85,7 Mio € for transport services,• 72,0 Mio. € for applying reduced tariffs school transport, elderly, socially deprived• 194,3 Mio € for infrastructure maintenance, incl. 5,1 Mio € for strengthening security measures	<ul style="list-style-type: none">• BVG measures its services continuously using both objective data as well as annual customer surveys• Data is submitted to CNB for monitoring and validation, calculation bonus / malus• Data is also used for:<ul style="list-style-type: none">– Planning purposes– Financial planning– Reporting to parliament and public

Managing PT contracts

Key indicators – example BVG contract (Berlin) 2

	Definition	Required Level of Performance
Regularity (objective data)	Scheduled service is operated within the defined operating frequency and max. 10 min after scheduled departure	Target values currently discussed
Punctuality (objective data)	A service is operated in time interval 90 sec before - 210 sec after scheduled departure	Underground: 98.7% Tram: 91.7% Bus: 87.1%
Connecting Services (objective data)	Maximum waiting time for defined connecting services 5 min.	Underground: 99.0% Tram: n.d. Bus: n.d.
Infrastructure (objective data)	Maintaining the quality of the infrastructure so that services can be provided at required level	Underground: < 0.5% ... Tram: < 0.8% of network subject to speed reduction caused by quality issues
Passenger Satisfaction (surveys)	Target values set for individual criteria (→ next slide)	Different values per criteria/mode

Managing PT contracts

Key indicators

Operations

- Reliability
- Punctuality
- Connections



Personnel

- Pleasant driving
- Service, friendliness and appearance of staff

Vehicles

- Age
- Comfort: seat number and quality, hand rails
- No breakdowns, damages
- Cleanliness
- Accessibility for PRM: low floor entrance, kneeling, even floors, wheelchair place
- Environmental standards: Exhaust gas, noise emissions

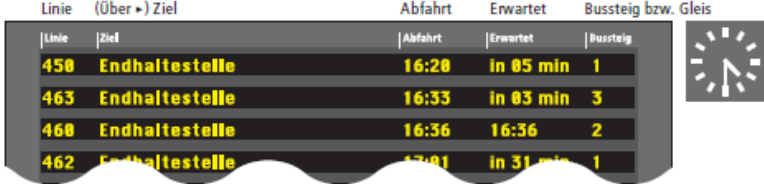


Managing PT contracts

Key indicators

Passenger Information

Linie	(Ober →) Ziel	Abfahrt	Erwartet	Bussteig bzw. Gleis
450	Endhaltestelle	16:28	in 05 min	1
463	Endhaltestelle	16:33	in 03 min	3
460	Endhaltestelle	16:36	16:36	2
462	Endhaltestelle	17:01	in 31 min	1



General requirements

- Regular info and – at least as important - in case of irregularity
- Static & dynamic
- Integrated: whole system / area of the transit area, not just for own company

Specific requirements

- Maps, line plans with connections, timetables, tariff information
- Technical standards displays front & in vehicle, colours/contrast, number of lines / characters
- Functioning of displays
- Hotline, Passenger Information App

Managing PT contracts

Key indicators

Bus stations

- Rain shelter
- Passenger information – also static & dynamic, timetable & tariff, integration

Further aspects e.g. social security

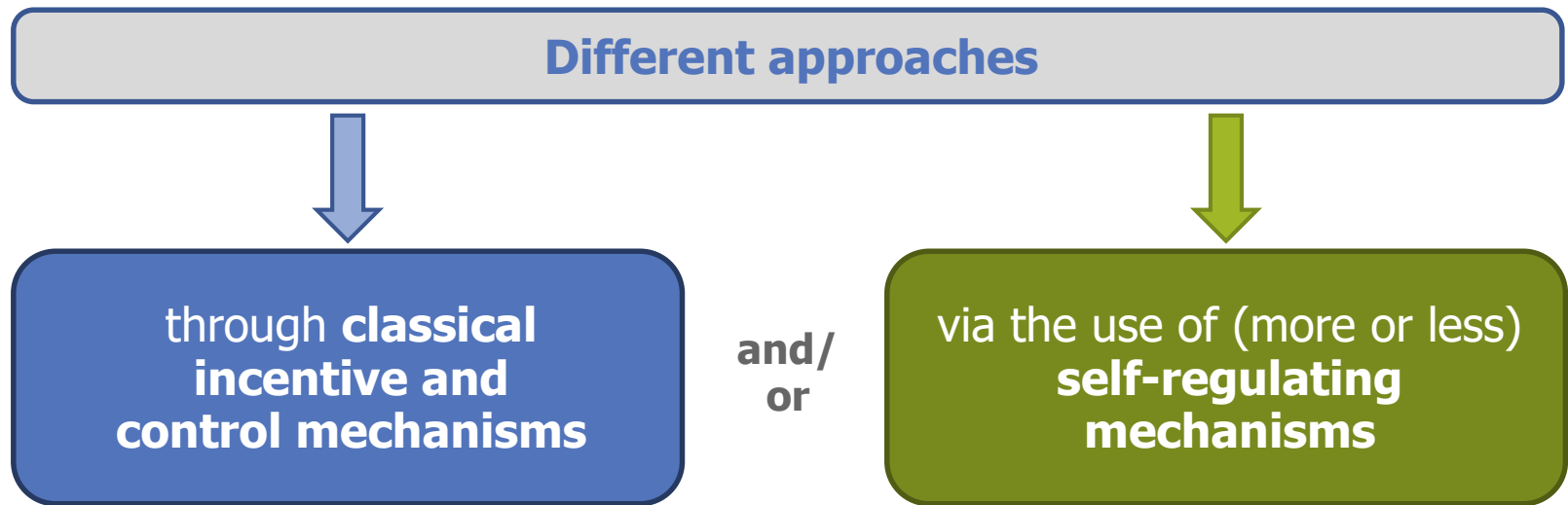
- Video surveillance
- Appropriate reaction of drivers in case of emergency
- Ticket control
- Cooperation with police



Managing PT contracts

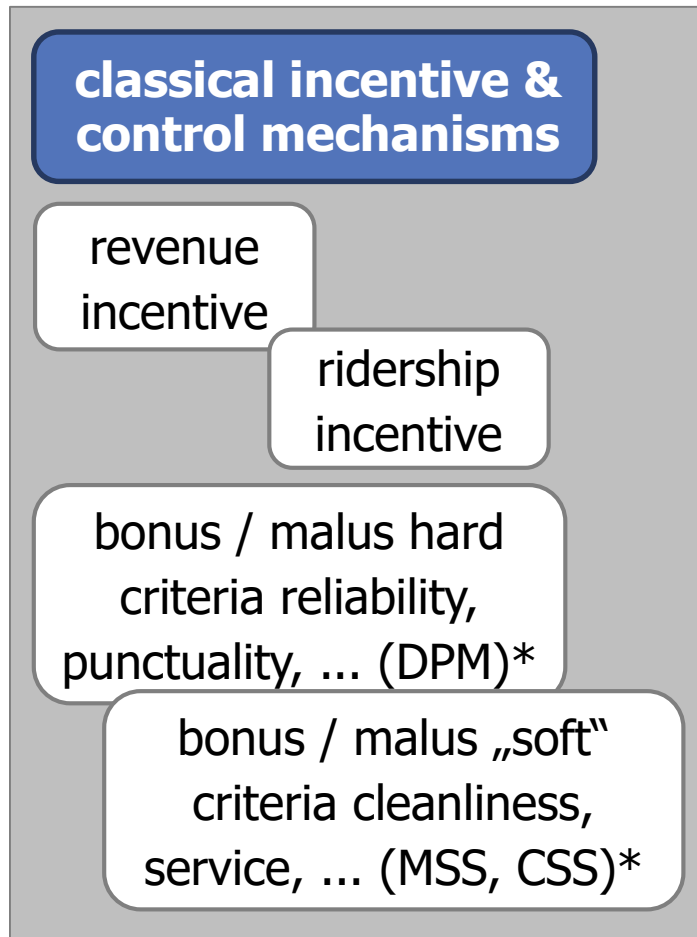
Classical approaches and current developments

The granting of financial subsidy, exclusivity or other support by the authority to the operator usually compensates for obligations defined by the authority. Control of the discharge of these obligations is necessary!



Managing PT contracts

Classical approaches – limitations



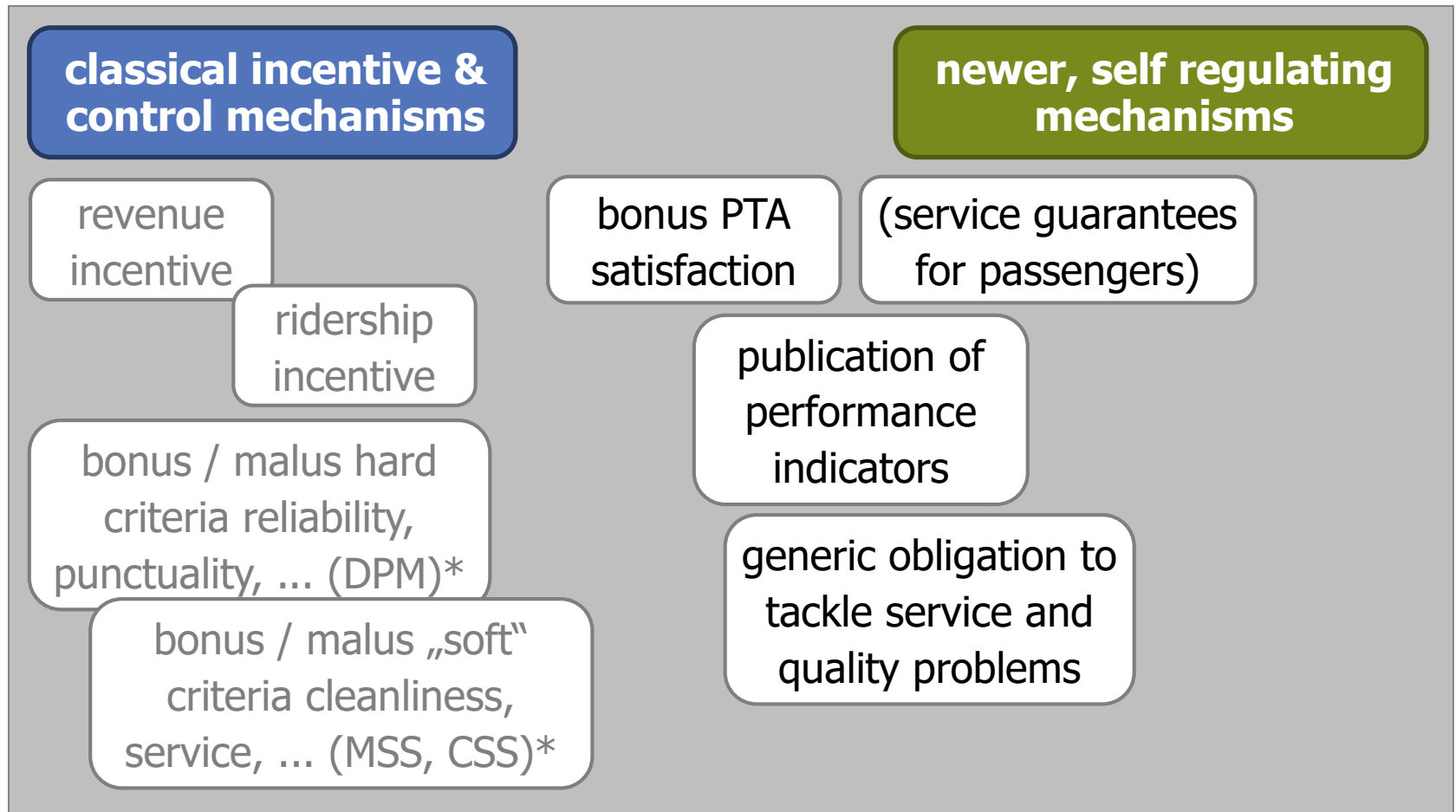
Limitations

- Net cost contract: requirements for effective incentive often not fulfilled
- DPM: useful mostly for reliability, punctuality; less for most other criteria
- MSS – high costs; objective definitions in line with passenger perception?
- CSS – high costs; attribution of results to lines / operators? Correlation satisfaction with actual quality?
- Standards/incentives fragmented/static

DPM = direct performance measurement, MSS = mystery shopping, CSS = customer satisfaction survey

Managing PT contracts

Classical approaches, current developments



DPM = direct performance measurement, MSS = mystery shopping, CSS = customer satisfaction survey

Contracting | Contract management

Instruments to eliminate the shortcomings of 'classical approaches' - examples

Cooperation is seen as an important field for improvement!

Instruments (examples)

Application Examples

Performance-based contracts

Stadsregio Amsterdam/The Netherlands

Communication authority-operator regarding the further development of service quality

2. generation of Swedish contracts, many contracts in The Netherlands: joint development teams

Agreed actions for achieving high service quality and demand growth

Helsingborg/Sweden, Copenhagen/Denmark Quality Partnerships (GB)

Incentive for satisfaction of the local authority

Many contracts in The Netherlands

Influence over the management / target agreement

Pforzheim/Germany

Award criteria demand growth / customer orientation

Current considerations in Germany

Customer guarantee

VBN Bremen, VVO Saxony, NVV Kassel/Germany

Transparency

Pforzheim/Germany and many more

Thank you.



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