

Devolution, integration and franchising Local public transport in the Netherlands

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Table of Contents

<i>Why look at the Netherlands?</i>	4
<i>The Netherlands</i>	7
<ul style="list-style-type: none"> • <i>Public transport authorities and funding</i> • <i>Bicycles</i> • <i>Mobility policies</i> 	7 9 10
<i>Public transport services in the Netherlands</i>	13
<ul style="list-style-type: none"> • <i>Typical supply level</i> • <i>Integration of services</i> • <i>Vehicles and branding</i> • <i>Ticket integration and public transport fares</i> • <i>Travel information</i> 	13 14 15 16 18
<i>Passenger transport legislation</i>	21
<ul style="list-style-type: none"> • <i>Public transport until 2001</i> • <i>The Passenger Transport Act 2000</i> • <i>Urban and regional public transport</i> • <i>Rail services</i> 	21 21 22 23
<i>Main franchising formats</i>	27
<ul style="list-style-type: none"> • <i>Service design by the operator under 'superincentive'</i> • <i>Service design by the operator under net cost contracting</i> • <i>Service design by the authority under gross cost contracting</i> 	28 31 34
<i>Outcomes</i>	38
<i>Comments on contracting approaches and recent trends</i>	42

Why look at the Netherlands?

Outside the three largest cities all local public transport in the Netherlands has been subject to contracting under competitive tendering by local transport authorities since 2001. A wide variety of approaches have been taken, all within the basic tenants of transport planning in the Netherlands. These include a strong commitment to integrated public transport networks and ticketing as part of a wider suite of policies that favour the bicycle and the integration of land use and transport planning.

The Netherlands now has 15 years of experience with competitively tendering area contracts with in most cases operators bearing responsibilities for service planning and marketing. As such in many ways the Netherlands has acted as a laboratory for different approaches to contracting integrated public transport networks – from which others can learn. The diversity of environments – from deep rural to larger conurbations – also provides a series of useful parallels for local transport authorities to learn from. This experience, which is presented in this report, is of high relevance for the current debate in the UK about the potential for franchising bus networks outside London.

One important remark in interpreting the findings of the report is that the context, starting point and motivation for introducing franchising in the Netherlands were different from the current situation in Great Britain. The 2001 Dutch reform implied a move from public operation under government regulation to devolved franchising. Bus services in the Netherlands were not fully deregulated but franchising was introduced to improve efficiencies and to allow the use of private sector expertise in generating more customer focus and service innovation. Furthermore, the prior regime of public operation

in the Netherlands already had a focus on ensuring integrated outcomes including on ticketing and services. This imperative has been maintained under franchising and was in several cases even extended to regional rail.

In comparison, the current debate in the UK discusses a move from deregulation to franchising in order to bring in more public sector influence and determination of bus services. One of the aims of franchising would be to realise levels of integration that are difficult to realise under bus deregulation. Another would be to allow local authorities to specify key features of franchised services - like vehicle standards, integrated fares and networks - and bring about the possibilities of such a contracting approach, similar to what is the case in the Netherlands.

This report aims to provide the reader with an overview of how local public transport in the Netherlands is developing. For this to be successful, it is important to correctly interpret the contextual differences summarised above and further elaborated upon in the report. This will help to overcome the difficulty presented by the fact that data on issues like fares, ridership, service levels are not available in the Netherlands to the same degree as in the UK. It will also help to avoid oversimplified extrapolations upon the results of franchising in the Netherlands, assuming that identical effects would result in Great Britain in terms of functioning or in terms of costs, ridership or fare levels. With these remarks in mind, it is hoped that this report will help those actively exploring the franchising option for bus services in the British context to understand the different forms of franchising that have been adopted in the Netherlands and the lessons learned over the last 15 years.



Passengers alighting at Delft train and bus station.

The context

The Netherlands has a population density similar to England, although a third of the population is concentrated in the Randstad where the challenges of traffic growth and congestion are particularly acute. Responsibility for local transport provision is devolved to the appropriate tier of regional government. Funding is centrally distributed rather than locally raised but local transport authorities have significant freedoms to determine how that funding is spent in line with local priorities.

Key features of local transport in the Netherlands are:

- A very strong commitment to integrated public transport networks and inter-connecting hierarchies of public transport services supported by integrated ticketing
- High levels of bicycle use and provision and a very strong cycling culture
- A land use planning system that promotes linkages with transport planning
- Free public transport for students
- Increasing focus on public transport lines with high passenger demand, while on lines with low passenger demand traditional bus services are increasingly replaced with small scale mobility systems
- Nationwide 'OV-chipkaart' smart card system giving passengers access to the entire public transport network with one card
- Outside the largest cities extensive experience of contracting local public transport networks by local transport authorities under competitive tendering
- A number of contracts have included both local rail and bus networks

Approaches to regional public transport tendering

Local transport authorities have adopted and implemented a wide range of contracting formats ranging from conventional highly specified contracts, to contracts which set objectives (rather than specify service details) and which utilise sophisticated incentive regimes to encourage operator innovation to reward hierarchies of objectives (such as patronage growth).

These different formats bring with them their own challenges and tensions. This includes:

- Finding the right balance between encouraging private sector innovation (rather than passive contract compliance), protecting minimum standards (without ossifying transport networks) and realising the public sector's legitimate social, environmental, and economic objectives for its local public transport network (but in a way that provides good value)
- Trade offs between the sophistication of incentive regimes and the ability of the market to respond to that complexity
- Managing the transition to radically new service patterns that operators could introduce
- Dealing with the implications of external shocks for the economics of the contracts (such as economic downturns)

- Ensuring adequate levels of competition for contracts
- The lack of uniformity of approach can also be a challenge for bidders and for evaluating the success and failures of so many different variations on the contracting theme
- Ensuring that lessons are learnt by local transport authorities from the diversity of approaches being taken

Over time a trend towards greater contractual specification of service detail by local transport authorities could be observed. This was in response to perceived risks and uncertainties involved in contract based more on objectives than detailed specification of services. However, new approaches have been developed – including greater co-development of services between operators and authority.

The outcomes and benefits for passengers and local transport authorities

The experience of the competitive tendering of public transport networks in the Netherlands, coming from the former non-competitive environment, is characterised by:

- Significant investment in vehicles leading to a modern bus fleet meeting high emission and accessibility standards
- Significant enhancements in service levels and the overall local public transport offer
- Though there are tensions between the local and national, and operators and authorities, integration remains a key feature
- Patronage data is not sufficiently robust to allow for a sophisticated analysis of impacts but the data suggests that local bus patronage remains stable
- Substantial improvements in labour productivity
- Falling costs of provision, although market prices have been rising again recently
- Rising levels of customer satisfaction
- High degree of fares integration with a degree of local specification of fares offers, all within the overall context of fares rising above inflation
- Formal role for passenger groups in service development and changes

There has also been significant innovation and diversity in approaches – ranging from small contracts for only one line or a group of lines to contracting of large public transport networks (rail and bus). There have been several cases where regular public transport contracts have been integrated with social, disabled and educational transport. This, however, has not always turned out to be successful: efficiency gains were lower than expected and organisation turned out to be rather complex due to the number of actors involved (both provinces and municipalities). The tendency towards replacing traditional buses with small-scale transport systems in rural areas does, however, bring new possibilities to integrate these systems with similar small-scale social, disabled and educational transport.



The new Sprinter trains from the NS gradually replaced rolling stock from the 1960's.

The Netherlands

- **Responsibility for local public transport networks devolved to regional tier of government**
- **Funding for transport centrally distributed but with significant freedoms for local transport authorities to determine their own transport priorities**
- **High levels of bicycle use and provision – and very strong cycling culture**
- **Land use planning system that seeks to promote linkages with transport planning**
- **Significant challenges on traffic growth and congestion particularly in the main Randstad conurbation**
- **Free public transport for students, funded by central government**
- **Experiments of pooling of social, healthcare, education and public transport budgets and services**

The western half of the Netherlands is characterised by a polycentric urban structure with Amsterdam, Rotterdam, The Hague and Utrecht forming the main conurbation known as Randstad (or 'edge city'). This area has a population of approximately 7 million inhabitants which is almost half of the 17 million inhabitants of the country, and has an average population density of about 1,000 inh./km². The Netherlands as a whole has an average population density that is approximately 20% higher than the population density of England.

	Netherlands	England	United Kingdom
Inhabitants (in millions)	16.8	54.3	64.6
Size (km ²)	41,528	130,306	242,514
Density (inh/km ²)	498	417	266

Source: Office for National Statistics (UK), CBS (NL), 2014

There are three levels of government in the Netherlands:

- National government: State
- Regional government: Provinces
- Local government: Municipalities

The twelve provinces are responsible for land-use planning, public transport, infrastructure (roads, bus stops), health policy and recreation, within policy boundaries prescribed by national government. The provinces also oversee the policy and finances of municipalities and water boards (these government bodies, called waterschappen and charged with managing dikes, waterways, water levels and sewage water treatment, are among the oldest forms of local government in the Netherlands). There are some provincial taxes but national government covers most of the budgetary needs of the provinces through transfers from national funds.

The 393 municipalities have various responsibilities such as education, spatial planning, and local infrastructure (roads, bus stops), this within policy limits prescribed by national and provincial governments. The municipalities have some local taxes but again national government provides most of their funding.

Until 2014 there used to be 'city regions' (stadsregio), which were compulsory municipal cooperations in the urban areas of Amsterdam, Rotterdam, The Hague, Utrecht, Rotterdam,

Eindhoven, Arnhem/Nijmegen and Hengelo/Enschede. These public bodies used to be responsible for several policy areas that would otherwise be covered by the province, such as land-use planning, public transport, infrastructure funding (though not maintenance), but also economic affairs, and housing and youth welfare. Their budget came mostly from national government with a smaller proportion coming from the participating municipalities. These city regions were abolished by law in 2015 and their responsibilities returned to the provinces. Two exceptions remain: in the Amsterdam and in the Rotterdam/The Hague areas the responsibility for public transport is now allocated to new 'transport regions' (vervoerregio) as successors to the city regions in these two metropolitan areas.

Public transport authorities and funding

Regular public transport

The allocation of responsibilities between the various levels of government mean that fourteen regional authorities are by law responsible for local and regional public transport in the Netherlands: twelve provinces and two transport regions. Their responsibilities include both local public transport services and some regional train services operated mainly on branch lines of the national train network, while the State is the transport authority responsible for national rail services, including both intercity services and most local train services operating alongside those services.

Two provinces, Groningen and Drenthe, decided to establish a common public transport bureau (OV-bureau) which acts as public transport authority for bus transport in these provinces. However, both provinces continue to act as independent public transport authority for regional rail transport in their respective areas. The province of Flevoland voluntarily allocated responsibilities for public transport in the city of Almere (the largest city in the province) to the municipality of Almere. In the future, Almere may become a part of the wider Amsterdam transport region.

As a result, there are seventeen public transport authorities: twelve provinces, two transport regions, one public transport bureau, one municipality and the State.

Local authorities (provinces and municipalities) have only very limited taxation powers in the Netherlands. Funding for public

transport services comes directly from the transfers from central government and is allocated to the regional transport authorities according to specific apportionment criteria. Since 2005 funding for public transport services became part of a wide transport-dedicated financial transfer from central government to the transport authorities (*Brede Doeluitkering, BDU*). Since then, local authorities have the freedom to allocate funding as they see fit between public transport and infrastructure (roads, public transport infrastructure, bike lanes, etc.) In the near future, this transport-dedicated funding will be merged with the general financial transfer from the State to the provinces (the provincial fund, provinciefonds), which means that provinces will have even more freedom to allocate funding between transport and their other responsibilities. On rare occasions local government (or even chambers of commerce, businesses, etc.) provide funding for specific local public transport services such as additional peak hour operation of shuttle services between a railway station and a peripheral industrial area. These services and their funding represent only a minute part of overall funding for transport.

	Authority	Type	Modal responsibilities
1	Groningen / Drenthe	Public transport bureau	Bus
2	Groningen	Province	Train
3	Drenthe	Province	Train
4	Fryslân	Province	Bus, train
5	Gelderland	Province	Bus, train
7	Flevoland	Province	Bus
8	Almere	Municipality	Bus
9	Utrecht	Province	Bus, tram
10	North Holland	Province	Bus
11	Amsterdam	Transport region	Bus, tram and metro
12	South Holland	Province	Bus, train
13	Rotterdam/The Hague	Transport region	Bus, tram
14	Zeeland	Province	Bus
15	North Brabant	Province	Bus
16	Limburg	Province	Bus, train
17	Department of Infrastructure and the Environment	State	National rail



School transport

Most Dutch tertiary education students benefit from free public transport. This system was introduced in 1991 as a commercial contract between the Ministry of Education and the transport operators, replacing former travel allowances to the students. This contract amounts to about € 700 million per year, which is constitutes a very substantial source of revenue for the public transport system.

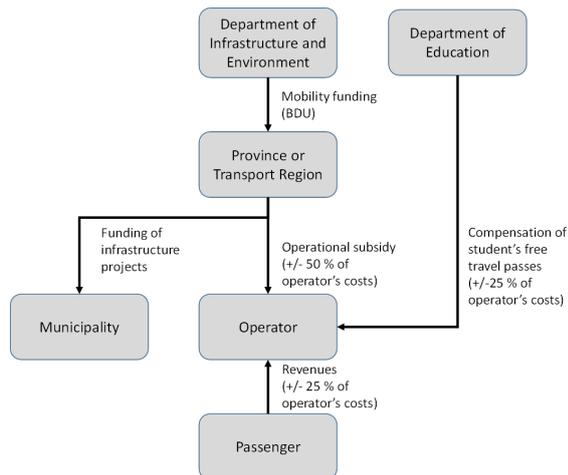
The free travel scheme does not include secondary education students; however, all persons under the age of 18 enjoy rebates on tickets and passes.

Only specific groups of pupils qualify for dedicated schools transport in the Netherlands. These are only provided to pupils who cannot make use of schools in their own neighbourhood (up to 6 km) for religious reasons or because they need special care (such as for health reasons), and also for those who live in areas where there are no schools in the neighbourhood. These bus or taxi services are usually not integrated with regular public transport and the funding source is also separate.

Note that some school transport provision falls within mainstream public transport funding. This includes conventional public transport services that are marketed especially for pupils or students (such as schedules that are aligned with school hours, or services with special branding) and regular routes with additional bus trips for pupils or students at peak hours. For example, a number of initiatives have been introduced to improve or combine services or to reduce costs. The Collegeliner was developed by Arriva in the province of Fryslân to reduce the overcrowding of some train and bus services at peak hours. Students avoid having to transfer while these services also reduce the peak loading on regular bus and train services. Sometimes special contractual arrangements between public transport authority and operator are made, often with a yearly re-evaluation of the usage of the school lines. One example of this can be found for some routes in the Province of Gelderland. Here, if the cost-coverage drops under 50%, the operator has to work with secondary schools along the route to create an additional marketing plan to raise ridership, but the line can be discontinued if this does not lead to sufficient improvements. In some cases, the authority exempts buses serving schools from meeting the general fleet age requirements and environmental standards.

Special transport services

The Social Support Act (*Wet Maatschappelijke Ondersteuning, WMO*) aims to allow the elderly and the disabled to live independently at home and take part in society for as long as possible. The Dutch government allocates general funds to municipalities out of which they also provide for the needs of their inhabitants fulfilling the WMO-criteria. The Ministry of Health, Welfare and Sports provides for an equivalent national mobility system (Valys), which allows elderly and disabled to travel from door-to-door on longer distances (usually with a combination of taxi and train services).



Note: this scheme shows financial relations in net cost contracts, which is the most common type of contract in the Netherlands. In gross cost contracts passenger revenues as well as the compensation for the student free travel passes go to the public transport authority.

The municipalities provide equipment or services (such as domestic support, special toilets, wheel chairs etc.) but also dedicated local and regional door-to-door transport as part of their WMO-services. People falling in specific categories can make use of these services. These WMO transport facilities are usually taxi or minibus services that have to be ordered one hour in advance.

Demand responsive regular public transport services open as WMO transport services are usually branded as RegioTaxi. Sometimes regular public transport users may also use these services. In such cases, the public transport authority allocates part of the public transport budget to the municipalities responsible for those WMO-services as compensation for the transportation of these passengers (for instance the passenger pays €1.75 per zone, which is above the usual public transport fare, and the transport authority pays €3.25 to the municipality

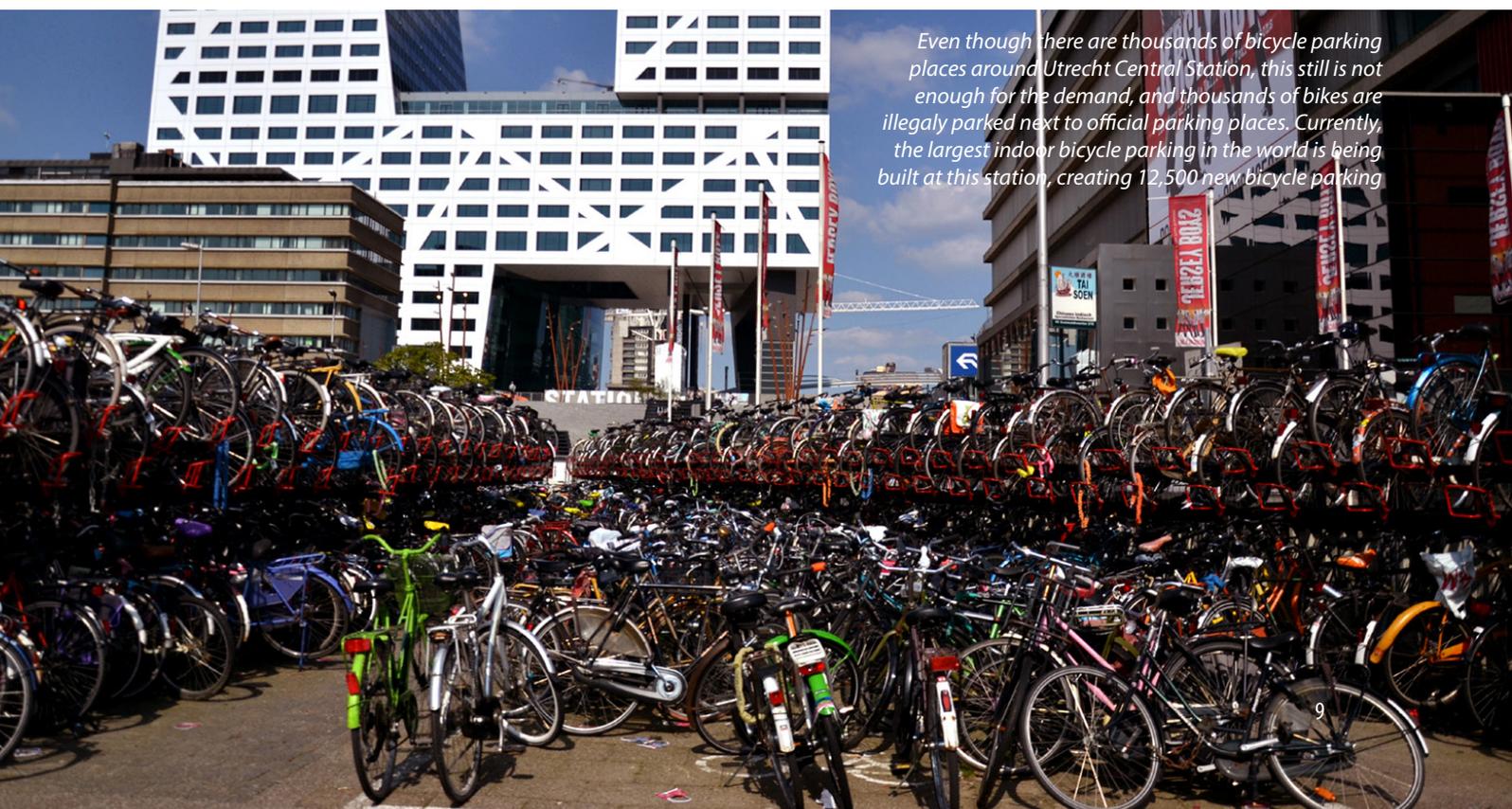
to cover the rest of the costs).

In general, though, the usage of WMO transport services by its target groups receives priority and most authorities discourage its usage as public transport for the general public due to its higher cost compared to regular services. As a result, mostly few non-WMO users make use of these RegioTaxi services, with a general balance between regular WMO users and other passengers using WMO services of about 85% - 15%.

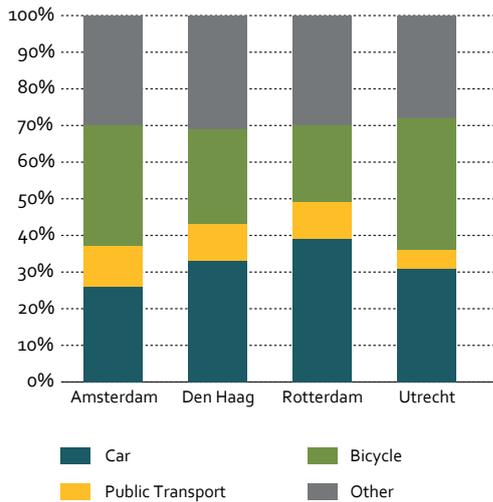
As we will describe in the next chapter, regular public transport has in the recent years become increasingly focused on lines with high passenger numbers. Partly due to budget constraints, public transport authorities tend to allocate an increasing share of their budgets to those lines. Doing so, they aim at improving public transport supply on those relations that can be competitive to the car and thus increase public transport usage. This approach, however, does lead to a decrease in public transport supply in more rural areas where demand is anyhow low. This raises the question of whether and how public transport authorities and municipalities should provide mobility solutions for people in those rural areas who cannot drive or who do not own a car. Several initiatives have been developed in the last few years to address these issues: see the text box 'Small scale public transport services' in the next chapter.

Bicycles

The Dutch transport scene is of course characterised by the major role played by the bicycle, which is the primary mode for distances up to 5 kilometres. A dense bike lane network is usually available within cities as well as between cities and villages. The bike is not regarded as a poor man's transportation mode and is used by all sections of society. A challenge, however, is the lower bicycle usage amongst immigrants.



Even though there are thousands of bicycle parking places around Utrecht Central Station, this still is not enough for the demand, and thousands of bikes are illegally parked next to official parking places. Currently, the largest indoor bicycle parking in the world is being built at this station, creating 12,500 new bicycle parking



Modal split in the four largest cities in the Netherlands (measured in number of trips). In Amsterdam and Utrecht more than one third of all trips are made by bicycles. Source: Kennisinstituut voor Mobiliteit (2015), Mobiliteitsbeeld 2014.

Cycling is consequently a very common form of transport in the Netherlands for short-distance trips (shopping, school trips, commuting and recreation), representing a substantial share of short distance travel in urban areas; a market that is covered mainly by public transport in other countries.

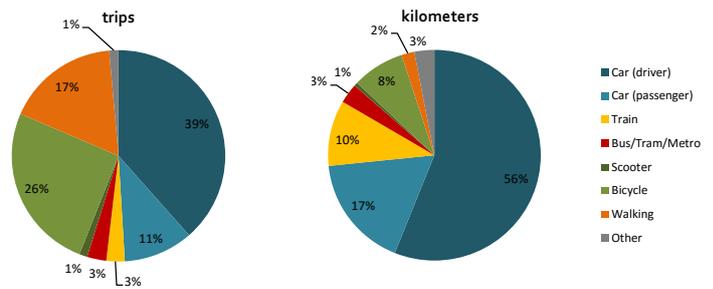
In recent years, transport authorities have tried to increase usage of both traditional and electric bicycles on longer distances, such as for trips between suburban towns and larger cities. In some urban areas, bicycle 'superhighways' (snelfietspad) have been built to accommodate cycling on these longer distances. Examples include the RijnWaalPad which connects the cities of Arnhem, Nijmegen and the rapidly growing suburban towns in between these cities.

The relationship between bike and public transport is ambivalent as they are the main competitors within cities for short distance trips. On the other hand, bikes can function as a feeder for the railways and for buses in rural areas. That role is stimulated by creating large parking lots for thousands of bikes near railway stations or near bus stops at the edge of a village.

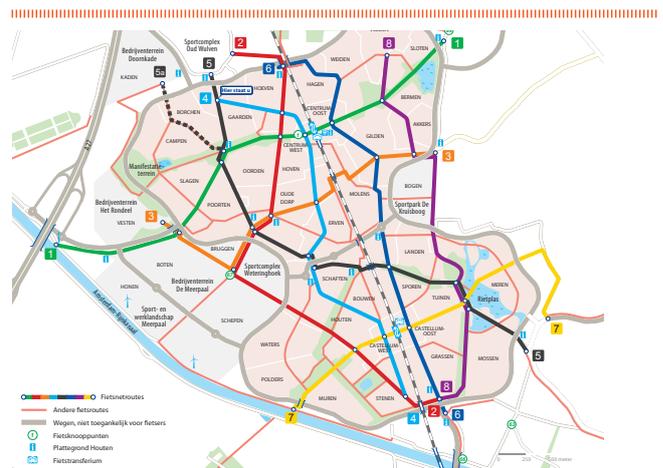
An interesting development is the substantial growth of bicycle hiring in recent years, mainly through OV-fiets ('Public transport bicycle'), a subsidiary of the Dutch Railways. It is now possible through this scheme to hire a bike at a station and other locations in major cities. The system is relatively cheap, costing €3.15 for 24 hours plus a yearly €10 subscription fee, and is very easy to use: the subscribers use a personal pass (usually their OV-chipcard) and in less than a minute they are ready to cycle.



The latest OV-fiets



Modal split in the Netherlands. These graphs clearly show that, although the modal share of bicycles measured in kilometres is relatively small due to the shorter distances covered by most cyclists, cycling has a very significant modal share in the total number of trips. Source: Kennisinstituut voor Mobiliteit (2015), Mobiliteitsbeeld 2014.



Dedicated cycling routes in Houten

Houten is a new town in the vicinity of Utrecht which counts 49,000 inhabitants. The railway station and the shopping centre form the core of the city, around which a large office and facility area (sports, medical, etc) are situated. The residential areas are situated around the centre with a decreasing housing density. From the centre a star-shaped bicycle and pedestrian network branches out into direct routes to the residential areas. All areas can still be reached by car, though car traffic must use the ring road to get from one residential neighbourhood to another, or to the centre. Thus in many instances walking or cycling is more attractive and quicker. The result in Houten is that there is relatively more walking and particularly more cycling, than in comparable centres. [Cycling in the Netherlands (2009), Fietsberaad]

Mobility policies

The road network of the Netherlands is very dense and most major cities are connected to the motorway system. This system suffers from congestion during peak hours – not only in the Randstad area. The government has tried to address this issue for many years including through proposals for a kilometre-based road user-charging scheme. However, this proposal was cancelled due to public resistance and dwindling political support. Instead, many motorways were widened, relieving some of the worst congestion.

A brief historical perspective on the Dutch car mobility policy is needed to understand these shifts. Around the turn of the century the Netherlands saw a major shift in mobility policies on both the national and regional level. In the 90s the Government's mobility policy – as formulated in 1988 White Paper – aimed at creating a modal shift from car usage towards public transport and bicycle usage.

This was considered desirable from both economic (reducing congestion) and environmental perspectives. However, this modal shift was not realised: despite various efforts, car usage increased by 45% between 1986 and 2001. This also meant that both the economic and environmental goals were not met: congestion kept increasing and the desired CO₂-reduction was not realised (CO₂-emissions from traffic increased by 40 % between 1986 and 1997).

These disappointing results led to a shift in policies. The 1988 plan was, with hindsight, considered too ambitious; it was felt that policy makers had had too much faith in the extent to which society could be influenced by such policies. This resulted in a new White Paper on mobility: the National Traffic and Transport Plan 2001 – 2020 (NVVP), adopted in 2000. The NVVP follows a more pragmatic strategy to reduce congestion and to promote sustainability and safety. The policy no longer aims to reduce car use, but instead seeks to reduce its negative impacts.

This policy was continued with the adoption of the White Paper on Infrastructure and Spatial Planning in 2012. From then on, emphasis was placed on a balanced mix of modalities, investing in both car and public transport, instead of aiming at a modal shift from car to public transport. An important focus is the accessibility of economically important areas. Therefore, new major investments were made to increase capacity on both the national motorway network and the main railway lines, aiming to increase frequencies on some of these lines to 6 Intercity and 6 local services per hour.

The Dutch railway service is arguably one of the best in Europe, already providing high frequencies on much of the network with at least two trains per hour on all routes and at least four intercity services and four local services in the *Randstad* area. The modal share of railways is relatively high in the Netherlands: 8.8% of all land passenger kilometres are made by train (8.2% in the UK and 7.4% in the entire EU [Source: Eurostat, 2014]).

Urban planning is generally considered in the Netherlands as the best means of reducing the need for travelling by car. The Netherlands has a rather strict urban planning policy, aiming at relatively compact suburbs with good provisions for bicycles and urban transport. Large suburban shopping malls hardly exist in the Netherlands and shopping needs are covered by smaller neighbourhood-oriented supermarkets.

The 90s saw the introduction of large new suburbs next to many large cities, following the policy conducted by the ministry responsible for land-use planning. These suburbs are designed in such a way that bus and bicycles traffic has the most direct connections to the city centre, whereas car traffic often has to follow a longer route. In addition, some of these new suburban areas have also a station on the national rail network or tram and light rail connections. However, this policy alone could not completely stop urban sprawl and high car usage in these new – often very large – suburbs. Although many of these new residential areas are situated as close to the city centres as possible, distances to the city centres remained often rather long for bicycles. In addition, these new suburban areas suffered from the fact that many new traffic flows were not directed towards the city centre anymore but towards surrounding urban areas. The proximity of many of these new suburbs to motorways and the increasingly sprawling office areas on the outer edges of towns further contributed to this effect. Many suburban and rural areas are therefore still conducive to a high modal share for the private car due to rather a low housing density in these areas, the long distances to public transport stops, and an insufficient realisation of the aim of providing public transport services from day one to the first residents of these new areas. Now that these suburban areas have almost all been realised, more recent policies regarding spatial planning have shifted towards inner-city development, rather than the creation of new suburbs. At the same time, responsibilities regarding urban planning have shifted from national and provincial level to the municipalities.

A relatively new element in the national mobility policy is mobility management, where the national government works together with regional authorities as well as the private sector to make mobility – especially commuting – more flexible such as to decrease the negative effects of congestion. A Taskforce Mobility Management was in place between 2007 and 2014, aiming for a reduction of 5 % of car kilometres in rush hours. One of the most important measures which could be introduced in various companies is that of a 'mobility budget' for employees, from which all work-related journeys can be paid, regardless of modality. This means that for each individual journey employees can choose how they want to travel, instead of being bound to either a lease car or public transport pass. Other measures include flexible working hours and stimulating working from home.



A new tram line connects the new suburban area 'IJburg' with the centre of Amsterdam.



HTM is one of the three remaining publicly-owned passenger transport operators in the Netherlands.

Public transport services in the Netherlands

- *Highly integrated public transport network with hierarchies of interconnecting services*
- *Increasing focus on improving public transport on corridors with high passenger demand*
- *Decreasing public transport supply on lines with low demand; authorities and operators are developing alternative mobility solutions for these connections*
- *Nationwide 'OV-chipkaart' smart card system giving passengers access to entire public transport network with one card*
- *One number, one website provides national public transport information service for passengers, and nationwide real-time passenger information is available through open data*
- *Modern, low emission bus fleet*
- *Contracting of regional and local bus and rail services is well established*

Typical supply level

Traditionally much emphasis was placed on network coverage in the Netherlands and the speed of services was, before the introduction of competition, generally slow. Typical service levels were every 20 or 30 minutes in urban and suburban areas and every 30 to 60 minutes in rural areas. Cuts in national funding for public transport were introduced together with the introduction of the Transport Act 2000 (see next chapter). This forced authorities to make choices that resulted in more focus on fast and frequent urban connections and less priority for rural areas where infrequent bus lines were further cut back in frequency, replaced with *neighbourhood buses* or cancelled altogether. At the same time, the first round of tendering resulted in an increased value for money for the taxpayer: the contract price per bus hour decreased. This efficiency increase often allowed for an increase in frequencies in urban areas; in many cases from every 30 minutes to every 15 minutes.

Currently typical service levels are:

- Urban: every 10 - 15 mins
- Suburban: every 15 - 30 mins
- Rural: every 30 - 60 mins

In recent years, even more emphasis was placed on improving services with high passenger demand. Public transport authorities and operators tried to improve the competitiveness of these services to car usage, hoping that this would lead to an increase in passenger numbers. Measures that have been taken typically include increasing frequencies and increasing speed, either by straightening routes or by building dedicated public transport infrastructures. In some cases, 'HOV' (*Hoogwaardig Openbaar Vervoer* or High Quality Public Transport) corridors have been designated, on which dedicated frequent and fast services are operated. Often, these HOV corridors have separate bus infrastructure on part of the route, or even the entire route. Sometimes, services on such corridors have their own branding, such as Volans in the province of North Brabant or Qlink in Groningen. The prime example is the R-net 300 tangential service (formerly known as Zuidtangent) in the Amsterdam area, connecting the southeast area of Amsterdam with Schiphol Airport, the suburban town of Hoofddorp and the city of Haarlem.

While these measures do increase the attractiveness of public transport for a majority of passengers, they do also lead to a

decrease in network coverage due to straightening of lines and the decrease in service on lines with very low passenger demand. This development raises the question of knowing to what extent public transport authorities should be responsible for supplying transport services in areas with very low demand. These areas are in most cases rural, but low demand services do also include some bus services in medium sized towns and larger cities. An increasing number of public transport authorities come to the conclusion that it is no longer financially sustainable to keep operating large buses on routes with only a handful of passengers. However, it is often felt that there should at least be some form of transport for those without cars or driving licences. Several initiatives have been developed in recent years, and more are expected in the near future (see textbox).



The first Buurtbus in 1977

The first Wensbus in 2014

Small scale public transport services

Several initiatives have been developed to provide transport in areas with very little passenger demand to improve efficiency compared to a regular bus service:

Neighbourhood buses (Buurtbus) (left picture) are the oldest of these initiatives. First introduced in 1977, these minibuses are operated by volunteers, organised in a non-for-profit Buurtbus organisation. The local public transport operator facilitates the maintenance of the vehicles as part of its contract with the transport authority, and also provides for service integration with regular public transport in the area (e.g. integration in passenger information systems, in the smart card system, etc.) A Buurtbus runs according to a regular timetable (in most cases once per hour) and there is no pre-notification time for customers. There are approximately 200 Buurtbus lines in the Netherlands. Bus drivers from regular public transport services often see the buurtbus as unfair competition as volunteers drive the buses.

A similar but more recent initiative is the **Wish Bus (Wensbus)** (right picture), operating in several municipalities in Limburg where the regular bus service was cancelled. These minibuses are also operated by volunteers and here too the vehicles are provided by the operator and funded by the authority. However, the operation is more flexible: the Wensbus usually does not have fixed schedules (except at some busy times), rather passengers call the driver or coordinator to make an appointment to take them from A to B.

In other areas, initiatives have been taken to bring people from villages to stops or stations of regular public transport. One example is the **Opstapper** service in Fryslân (derived from the verb *opstappen*, which means 'to board') and the very similar **Overstapper** service in North Holland. This is a taxi service that brings people from their home or from a central stop in a village to a centrally located transfer point where people can transfer to regular public transport. The *Opstapper* is part of the public transport contracts in the area but is subcontracted by the bus operators to local taxi companies. The service is not heavily used but the province states that the goal is not to attract as many passengers as possible here, but rather to provide a service for people without other means of transport. People are also encouraged to ride a bike to a transfer point instead and the province is to this effect investing in bicycles parking at transfer points.

On the island of Texel all bus lines except the busiest one have been replaced with the flexible **Texelhopper** system that allows passengers to travel directly from any bus stop to any bus stop on the island after notifying the operator at least one hour in advance.

This is also very similar to the *Regiotaxi* which operates in several parts of the Netherlands and which is a form of Wmo-transport for disabled people (see previous chapter) that can also be used by regular public transport users. In most cases, these *Regiotaxi* services are contracted by municipalities (who are responsible for Wmo-transport). In Limburg, *Regiotaxi* was contracted and operated as part of the regular public transport contract, but as the service was rarely used by non-Wmo users, it was decided that *Regiotaxi* would no longer be integrated in the next public transport contract. In the provinces of Groningen and Drenthe there are several further small contracts which combine Wmo-transport with small-scale regular public transport.

Finally, several public transport authorities are considering completely new forms of mobility services as a solution for rural areas. These include car-sharing solutions (possibly with volunteer drivers for passengers without a driving licence), encouraging the use of (electric) bicycles, and further ride-sharing services. However, these mobility services and especially ride-sharing services currently often face legal problems, as it is illegal to transport people for a fee without a taxi licence.

Integration of services

One of the traditional key features of Dutch public transport is the integration of services. Over the decades, the public transport system increasingly came to operate as one system based on a clear hierarchy of regular interval services: with intercity, semi-fast and stopping rail services complemented by express buses (where there is no rail service), and local bus services. Within the bus network there can also be hierarchies of fast (peak hour), local and community and demand responsive services. Much effort is put into ensuring good connections, both within these systems as well as between rail and bus.



A Brabantliner connecting the province of North-Brabant with the city of Utrecht.

On most journeys where no direct connection is possible, there is often a convenient connection with a short transfer between trains or between train and bus. Although bus-bus connections are less common, several rural areas are characterised by stand-alone interchange points that do not serve any local demand but are provided purely to facilitate interchange between inter-connecting rural services. These interchange points, that pre-existed the introduction of competitive tendering, continue to be provided in the tendered setting in various rural parts of the country. Some of these interchanges are provided in the evening hours such as to allow passengers from several smaller rural routes into one bus continuing to the next regional centre.

In fact, when setting up a timetable, bus operators often start with building a 'transfer scheme' in which the most convenient ways to connect to the railways can be found. Public authorities also place great emphasis on connections when tendering public transport services. However, although a high degree of connectivity can open up many journey opportunities for passengers because of shorter transfer times, a small delay on the first part of the journey may result in missing the next bus or train. To a degree the introduction of competitive tendering in regional public transport has introduced tensions between performance aims: an example is the conflict that arises between realising punctuality and realizing connections with services from neighbouring contract areas.

Long distance coaches hardly exist in the Netherlands as trains provide fast and frequent long distance services all over the country. Express buses fill the gaps in the network in those few cases where there is no rail service. In the 90s, the national bus holding company VSN introduced upon its own entrepreneurial initiative a national branding scheme for these long distance buses, called the *Interliner*. These services had higher vehicle and bus stop specifications, such as higher levels of passenger comfort on vehicles and real time information and bike parking at bus stops. These services were well integrated with train times and railway tickets could also be used on these services. The Passenger Transport Act 2000, by introducing regional tendering, abolished the possibility for innovation through the autonomous commercial market initiative that had generated this *Interliner* concept. As a result, the power given to the regional authorities meant that the focus shifted on how such express bus services could fit within regional service concepts; as a side effect the national brand of longer distance bus services and the corresponding ticket integration with the railways disappeared. However, many of the original *Interliner*-connections still exist



Three authorities in the north of the Netherlands use a blue 'Qliner' brand for their long distance bus services.

nowadays, in most cases operating under a regional brand name for express buses, such as *Qliner* (north of the Netherlands) and *Brabantliner* (province of North-Brabant). Furthermore, the recent deregulation of long-distance coaching in Germany and France is stimulating private operators to attempt to find ways to enter in this market, both for international connections – that already operate nowadays – but also for national connections. This constitutes one of the next challenges but also opportunities for Dutch regional public transport.

Almere: Substantial growth with Maxx high-frequent services on dedicated tracks

One example of a highly frequent urban bus network can be found in the city of Almere. This could be considered the first Rapid Bus Transit network in the Netherlands.



Almere. Turquoise: bus infrastructure. Grey, pink, yellow and white: road infrastructure.

Although Almere is a young city – it was founded in 1976 in an area reclaimed from the sea – it has grown to become the seventh largest city of the Netherlands (200,000 inhabitants), sprawling across a vast area. Many of its inhabitants work either in Amsterdam or Utrecht. Right from its conception, bus transport played a major role in the planning of the city: there is a large network of dedicated bus lanes connecting neighbourhoods with the city centre often via routes that are not open to cars. When the bus network in the city was for the first time competitively tendered, the winning operator (Connexxion) introduced a new brand for its new highly frequent bus services: *Maxx*. Frequencies typically are every 10 or 15 minutes, or better on routes with multiple bus lines. High-capacity low floor vehicles were introduced and – in order to reduce dwell times – passengers were allowed to board through all doors.

The introduction of *Maxx* has been highly successful: in the first year alone, ridership numbers went up by 40%. In 2004, *Maxx* was awarded the 'Passengers' Award' from passenger advocate organisation ROVER. The brand *Maxx* has since also been applied to other urban services operated by Connexxion (in Alkmaar and Amersfoort), albeit often at lower frequencies and speeds.

Vehicles and branding

The introduction of competitive tendering has led to a large-scale renewal of bus fleets. In many areas a brand new fleet was introduced after each tendering round. This was partly the result of (national) laws requiring accessibility for the disabled and other objectives set by the authority regarding the environment and accessibility.



Breng (which means 'bring') in the City Region Arnhem – Nijmegen was developed by Connexxion for the City Region.

The downside of specifying new vehicles was that buses from previous concessions were scrapped at a relatively young age. Because of this, some authorities now allow second hand buses to operate as well.

	Number	%
<i>Euro III</i>	233	5%
<i>Euro IV</i>	87	2%
<i>Euro V</i>	496	10%
EEV	3,475	70%
<i>Euro VI</i>	603	12%
Electric	51	1%
Total	4,945	

Source: based on data from KpVV (2015) 'Milieukwaliteit OV bussen'

At the moment, the 'average' bus in regional public transport is a Mercedes, VDL, Van Hool or MAN 12-meter long low-floor vehicle. On busy routes, single or double articulated ('bendy') buses can also be found. Regarding passenger comfort, most buses have simple seating, comparable to what is usual in the urban areas, except for a few longer-distance routes where coach-style seats are common. Environmental standards are usually Euro-5, Euro-6 or EEV; in some concessions the authority demands the use of CNG-buses.

In the most recent tenders, bidders are often stimulated to offer at least some zero emission vehicles from the start of operations or to offer a large scale transition towards zero emission vehicles during the contract period. The number of zero emission vehicles currently operating is mostly limited to a few pilot projects. The only exception is the small-scale public transport on the island of Schiermonnikoog, which is entirely operated with electric zero emission buses (built by the Chinese manufacturer BYD). These buses are operated by Arriva but were acquired and are owned by the province of Fryslân.

In most areas bus operators carry their own brands, using the name, logo and livery of the company itself. However, increasingly authorities specify a regional brand for all public transport in the area. In some cases, the brand is developed by the authority and in others by the operator. Usually this is a uniform brand for the entire area without differentiation in lines or product types. However, in some cases a special brand is used to distinguish some faster or more frequent lines from regular bus lines. Examples include *Breng Direct* (a variant of the *Breng* brand used in the Arnhem Nijmegen area), *Volans* (Noord-Brabant) and the above-mentioned brands for long-distance services. Similarly to *Breng*, the local authority-owned brand *U-OV* (OV = Public Transport) is used in the city of Utrecht, as well as the 'sub-brands' *U-Bus* and *U-Tram*.



Electric BYD bus on the island of Schiermonnikoog.



EBS-bus in R-net livery



A Qbuzz light rail vehicle in the 'U OV' livery, which was developed by the Utecht City Region

In the densely populated *Randstad* area in the west of the country, the public transport authorities are introducing a common brand name *R-net* for their most important lines. The aim is to create an integrated *R-net* network consisting of lines with higher quality standards (frequency, reliability, speed) all over the *Randstad* area, regardless of the operator or mode of transport: the *R-net* brand is used for regional trains, trams, light rail and buses. The number of *R-net* lines is gradually increasing as *R-net* is often introduced after a new round of tendering. This growth is also accompanied by a growing difference between *R-net* lines in terms of speed, frequencies and hours of operation, leading to some questions on the clarity of the brand message.

Ticket integration and public transport fares

1980 - 2011: *Strippenkaart* nationwide ticketing system

In 1980 the Netherlands saw the introduction of a national fare and ticket system for urban and regional public transport. With the exception of most train journeys, this covered virtually the entire public transport network, regardless of public transport operator. By using the '*strippenkaart*' (zoned multi-ride ticket) or the '*sterabonnement*' (zoned seasonal passes), passengers had the benefit that they could travel throughout the country using the same ticketing and fare system. Fares were based on the number of geographical zones 'crossed' (which were about 4-5 km in diameter). Ticket revenues were apportioned to authorities and/or operators on the basis of a complex nationwide passenger enquiry. Authorities were allowed to introduce regional tickets (themselves or through their operator) alongside the nationwide *strippenkaart* system.



Types of *strippenkaarten*. The one on the left is for reduced-rate travel

The major advantages of the *strippenkaart* meant that passenger could travel anywhere in the country with the same ticket, the disadvantages were the complexity of the system from a passenger's point of view (such as how to know the number of zones of a trip to stamp the correct number of *strips*). More importantly, it led to reduced incentives for the operators as revenue apportionment was slow, complex and imprecise, being based on yearly passenger surveys, with operators complaining that they received less money from the revenue allocation system than they should have received.

2005 onwards: *OV-chipkaart*: National Public Transport Smartcard

The introduction of competitive tendering in 2001 and the associated contractual revenue risk allocated to the operators required a more precise revenue allocation method. This was realised with the introduction of a national public transport smartcard (*OV-Chipkaart*) that gradually replaced the *strippenkaart* and the corresponding zonal system. The *OV-chipkaart* was first introduced in Rotterdam in 2005. It was gradually extended to other areas and the *strippenkaart* system was ultimately abolished in 2011. Unlike the *strippenkaart*, the *OV-chipkaart* is also valid on the national railway network, although NS kept its own fare system.

A major advantage of the *OV-chipkaart* is that it allows authorities and/or operators to devise their own fares to be more responsive to local needs than what could be done under the former national system. Another main advantage under the current tendering regime is that this system gives operators and authorities – in principle – more precise information on their revenues by providing detailed information over all journeys made. While the smartcard technology was meant to allow fare flexibility and innovation, political consensus meant that the current fare system remained very traditional, with the difference that unlike the *strippenkaart*, the *OV-chipkaart* is based on a kilometre-based tariff. Upon boarding local transport, passengers touch in and are charged a fixed check-in tariff of €4.00 (for rail journeys with NS this tariff is €10.00 or €20.00). When exiting the vehicle or the system, the user touches out and the correct fare is automatically calculated, deducted and displayed (similar to the *Oyster Card* in London). The ministry has set a uniform base fare of €0.88 (2015), leaving each region or province to set the price per kilometre. Prices per kilometre in bus contracts vary between €0.125 and €0.168, with an average of approximately €0.145. The base fare does not have to be paid again when a passenger exits a vehicle and re-boards another vehicle within 35 minutes (even if not re-boarding at the same



An *OV-chipkaart* issued by Trans Link System, the company responsible for operating the nationwide system. In addition, most operators also issue their own *OV-chipkaart*, which are also valid nationwide.



Operator brands of Connexxion and Arriva.

The table below lists the kilometre tariff for several regions (2015):



Area	Price per kilometre in addition to the base fare of €0.88
Region of Utrecht	€0.128
Fryslân	€0.145
Haaglanden	€0.152
North Holland	€0.138
North Brabant	€0.142
South Holland	€0.134 – 0.152
Twente	€0.151
Rotterdam	€0.135
Amsterdam	€0.151

The *OV-chipkaart* has made travelling easier for the passenger, not having to know in advance the number of zones. It has also allowed the introduction of an auto-reload option, such that passengers never have to think of buying travel credit. Despite these clear advantages, the introduction of the *OV-chipkaart* also led to complaints and resistance from passenger advocate organisations. This points at the importance of devising a proper, customer-minded implementation strategy. Here things could probably have been done in a better way. Complaints were that in some areas average fares increased, that the costs of acquiring an *OV-chipkaart* was relatively high (€7.50), that the system was cumbersome when connecting between operators (a passenger has to 'touch out' with the first operator and 'touch in' with the next). These issues triggered various improvement actions, in particular within the railway sector. Current developments include the gradual development of a 'post-paid' option, which could ultimately replace part of the store-value regime and allow for more fare innovation and ease of use.

Student Pass

Since 1991, most national Dutch students benefit from free public transport. This system is paid for by the Ministry of Education, which pays about €700 million yearly for this programme. The card was introduced to replace a complex system of travel allowances. It was cheaper to administer and at the same time gave the students the benefit of free national travel compared to the more restricted older travel allowances. Originally it allowed students free travel any day in the week. Since 1994 students have had to choose between a pass for

weekdays and a pass for the weekend. There have been repeated attempts by the government to end the Student Pass, which every time has been met by fierce resistance from student advocacy boards. The current coalition government initially agreed to end the Student Pass, however, after student protests, they agreed to continue the Student Pass and even extended it to Further Education college students.

Dutch Railway Passes

In the past, the Dutch Railways participated only marginally in the national fare and ticketing scheme of the *strippenkaart*, instead implementing a series of passes and tickets for exclusive usage on their network. The railways are now, however, part of the national *OV-chipkaart* smartcard system, and one of the major initiators of the system. While using this ticketing system, they continue using their own fare system. Fares are calculated based on the distance travelled. Passengers touch in and out at the stations (as opposed to the vehicles in bus and tram systems) and the fare is automatically calculated. NS innovated under the *OV-chipkaart* system offering a range of passes and discount schemes. For instance, for €50 per year a passenger receives 40% discount on train travel outside rush hours (between 9am and 4pm, and after 6:30pm). For €25 per month a passenger receives the same discount outside rush hours, as well as a 20% discount during rush hours. Additionally, travellers can buy either seasonal route passes or seasonal tickets covering the entire national network (including those routes tendered to 3rd-party operators). In 2015 a 2nd class nationwide year-pass costs €3,900.



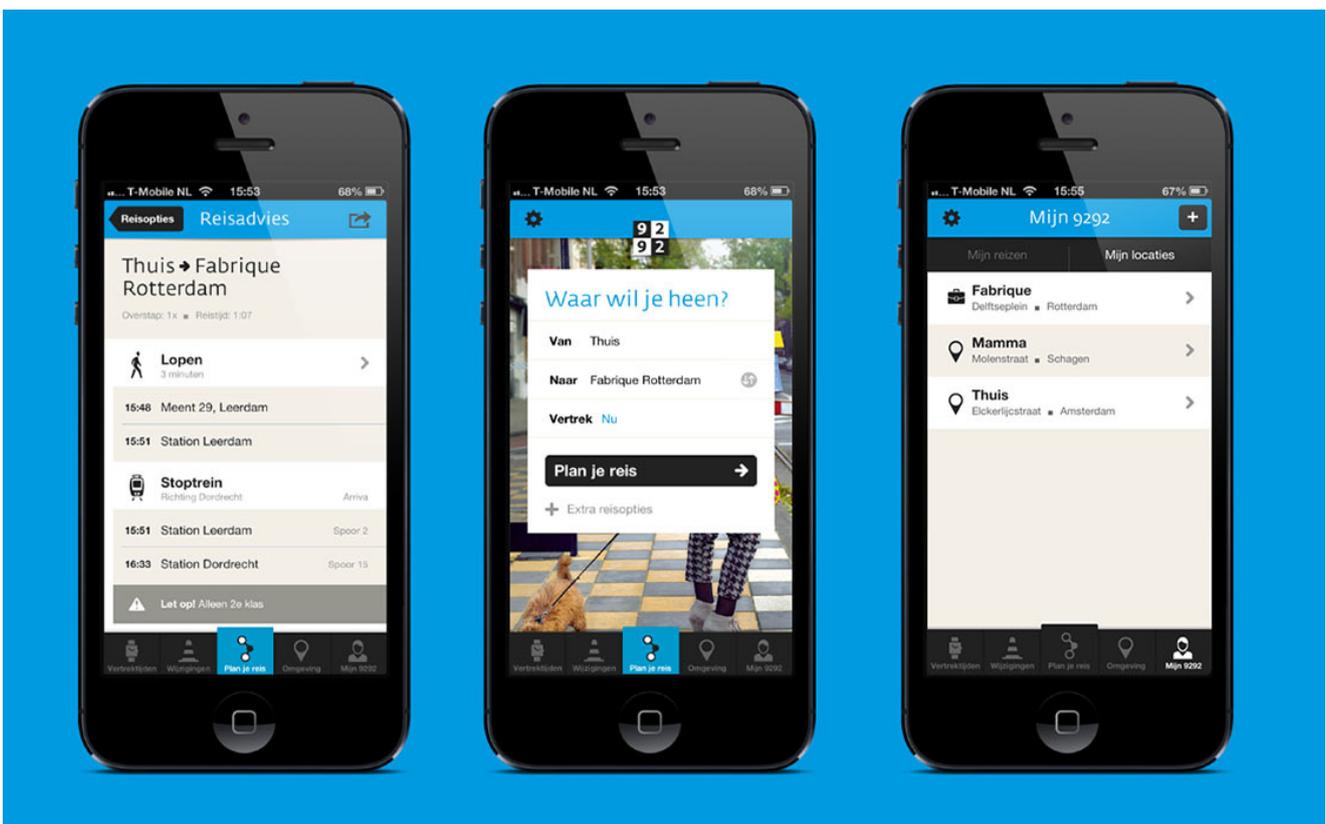
'Transfer point' on a railway platform, where passengers changing from Arriva to NS or vice versa have to touch out and to touch in again. These transfer points have been criticised for making the *OV-chipkaart* too complicated for passengers. Trials are currently (2015) being carried out with a 'single touch in – touch out' system for all railway operators, such as to be able to abolish these transfer points.

Travel information

Already by the 1990s the Netherlands had a nationwide door-to-door travel information service: 9292 (named after the customer phone number: 0900 – 9292). 9292's main services are a nationwide phone number and internet travel planner providing door-to-door public transport advice to passengers, including information on service disruptions and real-time service information. 9292 is owned and paid for by the largest transport operators. Smaller operators are not part of 9292; however, their information is included in the service, as all operators are required by law to provide timetable information to services such as 9292.

Recently, competitors for 9292 have appeared. This is possible due to the initiative taken by the Ministry of Transport and regional authorities to create a 'National Data warehouse for Public Transport' (*NDOV*) that collects and stores both static and real-time travel information from all operators in the country. This information is available as 'open data' (increasingly under a Creative Commons-licence) for any market party that wants to develop a travel information product (e.g. an app, a website, etc.) The information is also used as a source for real-time travel information displays at stops and stations. Two organisations applied to the Ministry of Transport to fulfil the role as '*NDOV* desk' where data is collected and from which third parties can receive data, and both were appointed as *NDOV* desk. One of these organisations is 9292, which thus provides data to its own competitors. The other *NDOV* desk is a non-profit organisation called the OpenGeo Foundation, aiming to stimulate the use of open data in the Netherlands.

Transport authorities set minimum levels of travel information in each contract. This provides passengers with a guarantee that bus stops will have a timetable, often a network map, and customer services contact. In addition, all operators have their own website with timetable information and a travel planner. Increasingly authorities also set minimum standards for these websites, as well as specifying requirements for information by mobile phone. Alternatively, the operator may be asked to develop a travel information plan as part of the tendering process, the plan is then evaluated as part of the awarding process. There has been a major expansion in real-time travel information at bus stops in recent years in many areas, mostly led under the administration of the transport authorities rather than through the operators. As part of contractual requirements operators are often asked to equip their buses with on-board GPS to track bus location and to send information to the central *NDOV* servers. Displays on bus stops showing real-time departure times are usually owned and maintained by either the authority or municipal road authorities.





When two different rail operators call at the same platform, travellers must check in and out from each mode using the chipkaart readers of the respective operator. Here in Duivendrecht, the platforms have readers for both the NS national railways and the GVB metro.



A Connexion onboard chipkaart fare reader with a debit card top-up machine underneath.



The Binnenhof, seat of the Dutch parliament in the Hague.

Passenger transport legislation

- 2000 legislation drives contracting of regional bus and rail
- Legislation based on open competitive tendering with authorities specifying objectives and service obligations and operators inputting on the detail of how best networks can deliver objectives most efficiently
- Competitive tendering market is mainly in the hands of four large operators
- Examples of integrated contracting of bus and train, leading to advantages for travellers as well as more efficiency in operations

Public transport until 2001

Until 1969: Private Enterprises

Until the 1960s regional public transport usually was a profitable business. Regional and urban public transport was carried out by private and public enterprises running under a licence granted by the national government. The state-owned Dutch Railways (NS) provided all rail services. There were no structural subsidies for public transport. Yet, together with rising labour costs, increasing suburbanisation and car usage, public transport became unprofitable in the 60s.

1969 – 1988: Stable State-Owned Companies

1969 was the first year in which losses by public transport were compensated by the national government. From 1974 onwards, the national government started subsidising companies structurally, while losses kept increasing. The national ticketing system (*strippenkaart*) was introduced in 1980 as part of a reform of public transport and its subsidisation. This was followed by a stabilisation of the subsidisation needs.



1988 – 2001: First Reforms

In 1988 a new Passenger Transport Act was introduced. Subsidies were now based on the amount of passenger kilometres realised instead of deficit reimbursement – this measure was meant to increase efficiency in the sector. Responsibility for urban transport was shifted towards the larger municipalities; regional transport remained under the responsibility of the ministry.

In the 1990s a Committee appointed by the ministry to tackle the problem of growing road congestion, suggested a more radical reform of the sector, aimed at generating a modal shift from car usage to public transport. In line with the spirit of the times the introduction of competition was proposed in order to reach this goal. Deregulation – as in the British bus market – was

considered but rejected. Instead, competitive tendering was chosen as the main policy. This led to the Passenger Transport Act 2000.

In the meantime, many urban and almost all non-urban bus companies in the country had become the ownership of the state-owned VSN Group. Pending the introduction of competition, this group was forced to sell parts of its operations to competitors. This led to the entry of Arriva and Veolia (at the time under the Connex brand) on the Dutch market.

The Passenger Transport Act 2000

The Passenger Transport Act 2000 (*Wet Personenvervoer 2000*) had two main goals:

- Increasing the attractiveness and usage of public transport especially in urban areas;
- A higher degree of cost coverage of by passenger revenues (in 2000 the cost coverage was approximately 35 % and the aim of the Act 2000 was to reach at least 50 %).

Public transport has since been organised according to the following principles:

- Exclusive public transport contracts are required to operate bus (max. 10 years) and/or regional train services (max. 15 years);
- Mandatory competitive tendering of these contracts under a regime that aims to utilise the operators' creativity and knowledge by giving them at least some service design freedom;
- However, national rail and the 3 largest cities do not have competitive tendering obligations.

The main long-term goals of this legislation were supposed to be the realisation of an increase in ridership (preferably at the expense of the car) and a higher level of cost coverage. For this purpose, one of the important ideas behind the Act was to give service design freedom to the operator in the context of competitive tendering procedures; in this way, the operator's knowledge and creativity could be used to reach the aforementioned goals. This idea was also related to another goal of the Act which was to professionalise the public transport sector in such a way as to avoid excessive authority interventions based on short-term political issues that would only hamper the realisation of long term policy goals. Reality proved to be different as the official 2004 evaluations of the Transport Act showed that an increase in ridership

could not be realised and that authorities tended to be very prescriptive in terms of services to be provided, especially in the years that followed the implementation of the Act.

Main features of the Passenger Transport Act 2000:

- *Decentralisation: 12 provinces and 2 urban transport regions are appointed as public transport authorities;*
- *Mandatory contracting of public transport by these authorities;*
- *Gradual introduction of mandatory competitive tendering of these contracts (except for the largest three cities and the national rail network);*
- *Staff transfer from the former to the new contracted operator;*
- *Legal advisory position for passenger representative organisations;*
- *Financing: the Ministry of Transport transfers budgets to the transport authorities, these authorities are free to decide on the contracting and incentivising schemes used towards the operators.*

Urban and regional public transport

The competitive tendering procedures are organised by each of the transport authorities. The authorities are free to decide on the division in contracting areas. This has led to a situation in which the Netherlands is currently divided into 55 contracts for bus, tram, metro, fast ferry and/or regional rail (down from about 72 contracts in 2005). The winning public transport operator receives a temporary monopoly right for usually 10 years (up from originally 6 years), with a possibility for rail concessions to last up to 22,5 years.

This exclusive right has to be submitted to competitive tendering. This obligation was introduced gradually after 2001 to reach currently all public transport services outside national rail and the main cities.

The tendering procedure is determined by additional national ministerial regulations that follow from the Passenger Transport Act and European tendering rules. The procedures set out in the regulations have so far prevented the usage of negotiations and required contracts to be awarded mainly through multi-criteria evaluations of bids. This may change in the near future with the implementation of new European tendering rules.

The four largest cities were originally temporarily exempted from mandatory competitive tendering when the Passenger Transport Act 2000 was introduced. Arguments for the exemption were varied: organisational difficulties in transferring the ownership of the municipal operators, relative inefficiency of these operators and – consequently – the need for a longer time to adapt to the new setting, political support for public ownership, trade-union opposition to competition, and the argument that the larger complexity of public transport in main cities (large volumes of passengers, coordination issues between different modalities, etc.) would argue against an easy transfer to a tendering regime.

With the enactment by the European Parliament of the new Regulation 1370/2007 allowing in-house operations in public transport, the Dutch Parliament eventually requested the government to transform this temporary exemption of

competitive tendering in the main urban areas into a permanent exception. This move was also related to a widening scepticism about the positive effects of competitive tendering, despite successes that could also be observed. As a result, these cities have chosen different paths. The cities of Amsterdam, Rotterdam and The Hague have chosen for keeping their public operator in charge of public transport, albeit under stricter contracting conditions. The fourth large city (Utrecht) privatised its municipal operator. However, the transport authorities of Rotterdam and The Hague have subsequently decided to tender out all bus services, keeping their respective municipal operators in charge of only tram and metro services. The three remaining municipal companies carry a major share of local and regional public transport in the country.

The rights of operational staff and passengers are protected by law (WP2000). A contracted operator has to take over the operational staff from the former operator. The strong trade-union power in the sector, and some political support, managed to guarantee these protections. This guarantee covers all operational staff directly involved in the operations of the concession (mostly drivers), but also a certain percentage of office staff (planners, etc.) The winning bidders have to take over this operational staff at their current employment conditions, and these have to be maintained for at least a year. For direct overhead staff (managers and assistants in offices and regional offices), only those personnel directly involved with the concession should be transferred to the new concessionaire. In most cases they remain employed in the same area. The same applies usually to indirect overhead staff (management at headquarters) as well, however due to the indirect nature of the relationship a mathematical equation is used to determine how many employees from the main office should be transferred to the new concessionaire. In practice the transfer is often used to organise an internal reshuffle and to pass less productive personnel to the winning competitor. Because the reorganisation affects staff at the central office, the transition often results in a reassignment to another office location.

Passenger’s advocate organisations have a legal position: authorities and operators have to consult these organisations at certain defined moments, including during the tendering process and when designing a new timetable. In most areas, a permanent regional consultation structure between authority, operator and passenger organisations has been implemented in order to deal with this.



Rail services

The 1995 reforms of the railway sector initiated a separation of rail infrastructure management (including traffic control and capacity allocation) from train operations. A further contractual reform introduced in 2000 when it was decided to let the existing main-line network “find its new equilibrium” without competition. Both NS (the train operator) and ProRail (the infrastructure manager) are publicly owned limited liability companies. NS (the national operator) was granted an exclusive right and duty to operate the whole main-line network until 2015, including both the profitable intercity train services and the often non-profitable local trains on those same routes. Both are submitted to a contract (concession agreement) with the ministry, recently renewed for the period 2015 – 2025, and both have to submit a yearly management plan to the ministry. Some incentives are related to the realisation of the aims set in these plans.

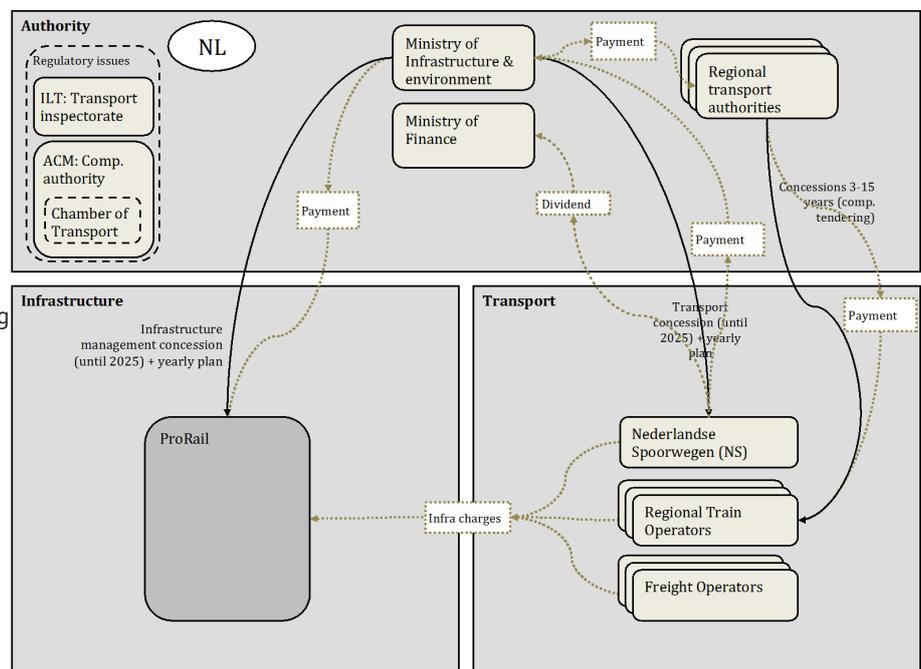
On-the-track competition in passenger transport by train appeared shortly after the 1995 reforms, although not exactly as planned: a small company called Lovers Rail operated between Amsterdam, Haarlem en IJmuiden (1996 – 1999), which was later sold to Connex/Veolia. This operation, which led to an important political debate about competition on the railways, was not successful: Lovers did not manage to make a profit from the operation of these passenger trains. This was partly due to a lack of ticketing integration with the national railways (NS). The failure of Lovers Rail led to the political rejection of further elements of free competition on the tracks (except for freight transport).

The first experiments with decentralisation and contracting of regional rail transport took place in the 1990s. In the eastern part of the Netherlands, the state-owned regional bus operator won the right to operate a short railway line by competitive tendering. NS started a joint venture (Syntus) with that operator and a subsidiary of the SNCF Group (French state owned railways) to operate an integrated bus-train network and was granted by the same province a further contract, at that time still without competition. A similar development was seen in the north where NS co-operated with Arriva in a joint venture called NoordNed. Later NS sold its share in both NoordNed and Syntus. Both joint ventures aimed at creating synergy between bus and train. Bus lines running parallel to train lines were rerouted and were connected to the train instead, reducing costs and increasing the cost coverage of the railway. Passenger service was increased by guaranteeing bus-train connections and vice versa and by providing integrated tickets and passenger information. In addition, operations were made more flexible, with train drivers also working as bus driver and vice versa.

With the 2000 reform, it was decided that most branch lines of the national rail network would be submitted to competitive tendering, as a separate contract or in combination with the adjacent bus concession. This has now been realised and currently Veolia, Arriva, Connexion and Syntus operate such lines. In some cases, the authority has tendered bus and rail together in order to realise synergy.

A further major competitive tendering case is that of the high-speed line Amsterdam-Rotterdam-Brussels-Paris that partially entered service in 2009. HighSpeedAlliance (HSA), a joint venture of the NS and KLM/Air France, won this contract. In contrast to regional tendering, where the government subsidises the concessionaire, this contract was to entail a yearly payment of € 148.26 million by HSA to the State. Unfortunately, the realisation of this tendered contract was characterised by a complex set of problems. The infrastructure was realised with some delay. Severe problems appeared in relation to the rolling-stock procurement: late delivery, unreliability, prohibited from running in Belgium by safety authorities, etc. The rolling-stock procurement contract was ultimately cancelled and the first trains sent back to the manufacturer. Furthermore, the train operating company (HSA) had also run into financial difficulties. The whole situation led to a Parliament enquiry, the final report of which was published in 2015. This failed tendering case led the Ministry to decide to re-integrate this high-speed operation within the main contract for train operations on the national railway network with NS, without re-tendering.

A recent development is the decentralisation of two local train services in the province of Limburg. These services run on the same tracks as NS Intercity trains. This decentralisation was agreed between the ministry of infrastructure and the environment and the province of Limburg in 2014 after pressure both from regional governments to decentralise more railway lines as well as pressure from operators (except NS) to open more rail services to competition.



The two decentralised local services were tendered as part of the province-wide Limburg contract that includes both bus and rail. In 2015, Abellio (owned by NS) was awarded the Limburg contract, but the province revoked the award after it came to light that Abellio had illegally acquired information from competitor Veolia. The contract was then awarded to runner-up Arriva. This would mean that these lines would be the first place in the Netherlands where two operators share the same tracks for a significant length whereas NS will continue to operate Intercity services on the same tracks. However, the tender procedure is currently still contested by Veolia.

Public Transport Operators

The market for public transport that is subject to competitive tendering is mainly in the hands of four large operators:

- **Transdev** owns two major bus operators in the Netherlands: Connexxion and Veolia. Both operators exist alongside each other. Recently, steps have been taken towards integrating these operators: since 2015 they share the same board of directors.
- **Connexxion** evolved out of VSN, the former state-owned holding company that owned most regional bus and minor urban operations. VSN was forced to sell some of its operations in order to facilitate the introduction of competitive tendering in the Netherlands. The remainder became Connexxion. In October 2007 Connexxion was sold to the French company Transdev, which later merged with Veolia Transport, another French company. Connexxion also owns the former VSN-company Hermes (partly operating under the brand name 'Brengr').
- **Veolia** started operating in the Netherlands when it took over BBA, the regional VSN bus company in the southern province of North-Brabant. In December 2006 BBA lost its 'home territory' of Brabant in a competitive tendering process. However, in the same year it won the tender of the entire neighbouring province of Limburg, making this the largest area that Veolia operates. The French holding company of Veolia Transport subsequently merged with Transdev. In 2015 it was announced that Veolia lost the most recent Limburg tender to Arriva, which means that Veolia will lose most of its territory in 2017.
- **Arriva** (originally a private British operator, now owned by Deutsche Bahn, the German state railways) entered the Dutch market when it took over two former VSN bus companies in the North of the Netherlands. Its territory extended when it won several

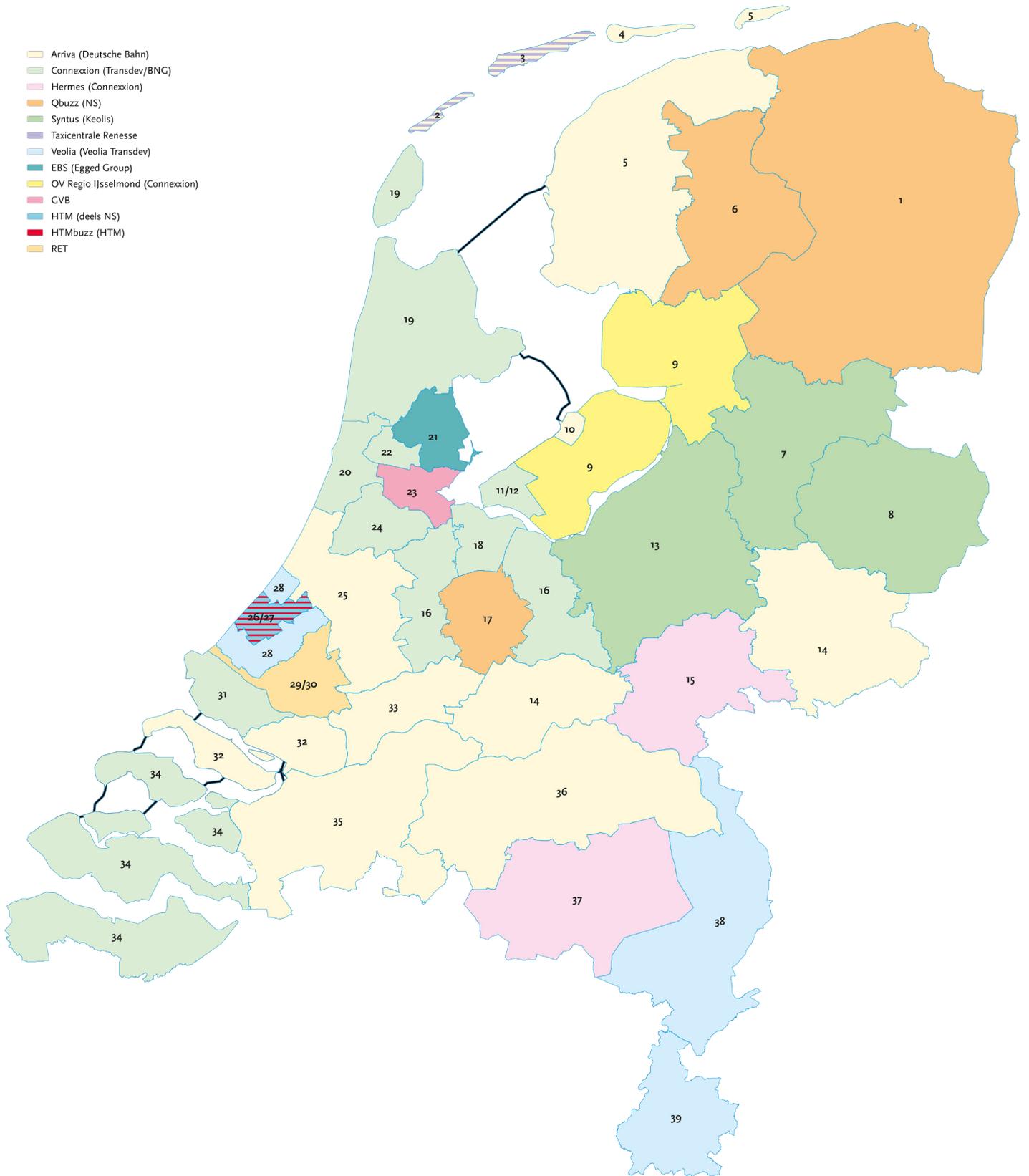
concessions in various parts of the Netherlands, including the concession for all regional rail lines in the North of the country. In 2010 Arriva was taken over by the German national railway company DB. In recent years, Arriva won a significant market share in several major tenders, including the entire province of North-Brabant and most recently the entire province of Limburg.

- **Qbuzz** is a Dutch bus company, fully owned by Abellio, which is in turn owned by Dutch national railways (NS). Qbuzz was founded and previously partly owned by two former directors of Connexxion, who later sold their shares to NS. Qbuzz won its first concessions in 2008 in the northern province of Fryslân, and another one in the Rotterdam area. Later it won large concessions in in the northern provinces of Groningen and Drenthe and the city region of Utrecht. In 2015 it was announced that Abellio had won the tender for the very large Limburg concession. However, shortly thereafter, NS disclosed that their tender team had used confidential information acquired from competitor Veolia. The province subsequently decided to disqualify Abellio and to award the concession to Arriva instead.

There are a few smaller operators besides the main four companies:

- **Syntus** is owned by the French company Keolis (part of the French national railway group, SNCF). Its core Dutch operations started prior to the Passenger Transport Act 2000 as a joint-venture between the Dutch national railways NS and a regional bus operator of the VSN-groep (Oostnet). VSN sold its shares of the company to Keolis, which later also bought the rest of the company from NS. Syntus resulted from an earlier regional project that aimed at better integrating the operations of buses and trains in this area. Recently, Syntus lost its home territory when the Achterhoek area was tendered for the first time; much to the dismay of many political and passenger organisations who saw Syntus as 'their' regional company. Syntus continued to operate, however, as it won two concessions in the neighbouring Veluwe and Overijssel area.
- **EBS** is a new operator for the Netherlands, partly owned by the cooperative bus company Egged from Israel and partly owned by Mobilis (Poland), which is in turn also owned by Egged. In December 2011, EBS started operating the Waterland contract near Amsterdam, its first (and so far only) contract in the Netherlands. In December 2013 EBS announced that they suffered major losses on operations. EBS then redesigned their network to make the operations more profitable.
- **TCR** is a small private company whose main business is running taxis and tourist transport in the beach holiday resort area of Renesse (South Holland). It operates three small public transport concessions on the islands of Vlieland, Ameland and Terschelling, in a joint-venture with Arriva. In addition, Arriva and Veolia have also sub-contracted some of their bus services to TCR.

Operator	Owned By	Modalities
Arriva	Arriva-Deutsche Bahn (D)	Bus (multiple areas), Regional rail (multiple lines), Ferry (Rotterdam area; cooperation with Doeksen)
Connexxion (incl. Hermes)	Transdev (F)	Bus (several areas), Regional rail (Amersfoort – Ede)
Veolia Transport	Transdev (F)	Bus (multiple areas), Regional rail (multiple lines)
Qbuzz	Abellio - NS (NL)	Bus (multiple areas), light rail (Utrecht)
Syntus	Keolis (F)	Bus (multiple areas), Regional rail (Zutphen- Oldenzaal)
EBS	Egged (Israel)	Bus (Waterland concession)
Gemeente-vervoerbedrijf, Amsterdam (GVB)	Municipality of Amsterdam	Bus (Amsterdam), Tram (Amsterdam), Metro (Amsterdam)
Rotterdamse Elektrische Tram (RET)	City region of Rotterdam	Bus (Rotterdam), Tram (Rotterdam), Metro (Rotterdam), Light rail (Randstad-Rail: Rotterdam – The Hague)
HTM Personenvervoer (HTM)	City of The Hague (51 %), NS (NL) (49 %)	Bus (The Hague), Tram (The Hague), Light rail (RandstadRail Zoetermeer – The Hague)
TCR	Taxi Centrale Renesse (NL)	Bus (Vlieland, Ameland, Terschelling Islands, joint-venture with Arriva) , and some subcontracted operations for Arriva and Veolia
Nederlandse Spoorwegen (NS)	PLC, 100% shares owned by government	National rail





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Main Franchising Formats

- *The Transport act 2000 leaves considerable freedom for authorities to decide on the way services are contracted, and as a result, a wide variety of contractual formats has emerged. The three main contractual formats are net net cost, gross cost and superincentive.*
- *Net cost contracts are the most common. The operator has at least partial design freedom, the operator carries the revenue risk and is awarded a fixed yearly subsidy.*
- *Gross cost contracts are less common. The operator has little design freedom, carries no revenue risk, but receives a yearly payment and some financial incentives related to service quality criteria (such as for punctuality).*
- *There is a limited number of 'superincentive' contracts. Here the subsidy is directly related to passenger revenues, aiming to incentivise the operator to attract more passengers.*

Operators are selected in a competitive tendering procedure, but the Act leaves considerable freedom for authorities to define the way in which services are contracted. Due to this, the reform aimed at concentrating the authorities' interventions in setting public transport 'aims' through – preferably – a functional definition of service aims. It tried to discourage them deciding on 'means' such as the location of specific stops, routes, etc. Such approach was deemed necessary to counter the tendency that could be observed within some city councils to overvalue the needs of the last single underprivileged passenger and to undervalue the needs of the majority.

One of the effects of the Act has indeed been beneficial in forcing the authorities, in their new role as transport authorities, to develop explicit public transport policies at a more strategic level, stating general goals and priorities, combining the locally accountable transport authorities' understanding of local need with the operator's understanding of how these needs can best be met in a cost effective way. A benefit of the regime is also that it retains the ability to plan and integrate services while doing so in a way that allows for private sector cost control and innovation. As the following examples will show, the past fifteen years of experience with contracting and competitive tendering in Dutch public transport have seen the development of a broad spectrum of contracting formats. These vary in a number of respects, including:

- Level of service design freedom given to the operators during the tendering procedures;
- Level of service design freedom given to the operators during the contract period;
- Type and scale of the incentives given to operators to ensure the achievement of the transport policy aims;
- Size, length and scope (bus and/or train) of the concessions and;
- Selection and awarding procedure.

It is impossible to present all of these options in detail here. For clarity's sake, we will present three typical cases that exemplify the range of contracting formats that have developed:

- **Superincentive contracting:** the operator is granted a substantial level of service design freedom during the awarding procedure and during the contract, the minimum service requirements are specified by the authority in a functional way (i.e. services to be produced are specified according to a set of accessibility norms that have to be realised for a specific population, area or town, rather than according to routing and timetable to produce), the operator carries revenue risk and is stimulated to grow ridership by powerful financial incentives related to realised ridership, the contract does not in principle include any fixed annual payment;
- **Net-cost contracting:** the operator is granted some service design freedom during the awarding procedure and during the contract, the minimum service requirements are specified by the authority in a functional way, the operator carries revenue risk, the operator is granted a fixed annual contractual payment ('subsidy');
- **Gross-cost contracting:** the operator has no service design freedom, the authority fully specifies the services to be provided (although the operator could suggest service improvements), the operator does not carry any revenue risk but they are stimulated by some financial incentives related to service quality criteria (e.g. punctuality).

Let us look in more detail at each of these three concession types.



Service design by the operator under 'superincentive'



All suburban/regional bus services in the suburban area around Amsterdam City have been subject to competitive tendering. This is done under a revenue-based contract that can be classified as a 'super incentive' contract. The transport authority of Amsterdam (Stadsregio Amsterdam – SRA, City Region of Amsterdam – currently being

transformed into a transport region) has a total budget of approximately €4,00 million per year, out of which €225 million is paid out to public transport operators for operations, including rolling stock depreciation and interest payments. Passenger revenues yield about €175 million per year. SRA wanted to achieve patronage growth and has chosen to this effect a revenue-based contracting approach where the main incentive is rewards for patronage growth. In this type of superincentive contract, the subsidy is based on revenues. So subject to checks and balances (detailed below) the more revenue growth achieved by the operator, the more subsidy the operator receives. The yearly fare increase for the total fare basket is capped by the City Region (on the basis of a national index determined by the cooperation of Dutch transport authorities), the operator has the freedom to determine individual fares within that framework. This has led the operator to innovate by introducing off-peak fares and see what is the most adequate fare mix for the concession area considered. Revenue increases can also be achieved by an increase in ridership, which is one of the main long-term goals of the authority. At the same time, to provide for a well-balanced contract operators are also allowed to redesign services within some strict boundaries set by the authority (such as detailed minimum service levels). This approach is used in all three regional bus contracts in the Amsterdam area: Waterland (183 buses), Zaanstreek (62 buses) and Amstelland Meerlanden (261 buses). All three contracts include high frequency suburban bus lines – the corridor from Waterland to Amsterdam is the busiest bus corridor in the Netherlands in terms of buses. The Waterland contract, however, also includes some more rural

areas and several bus lines with a rather low passenger demand. The Amstelland Meerlanden contract includes the Zuidtangent corridor from Amsterdam Southeast via Schiphol Airport to Haarlem, which includes 40 kilometres (25 miles) of free bus infrastructure.

This contracts were designed so that the operator would be under a strong incentive to increase demand and thereby revenue. The contracts were also designed to be self-regulating, as poor services would mean no passengers, no turnover and thus no subsidy. The danger of such a contract resulting in substantial subsidy increases was countered by making use of the competitive tendering procedure to calibrate the incentive to a realistic level. The total available yearly subsidy is set out at the beginning of the tendering procedure. The bidders are then asked to make an offer for the level of revenues they think they can achieve during the contract period. The total available subsidy per year is then divided by this revenue bid for each year. This determines a so-called 'subsidy factor' or multiplier. The actual subsidy paid by the transport authority during the contract is then calculated by multiplying the realised revenue – not the promised revenue – by this subsidy factor. This results in a high level of self-regulation as an exaggerated revenue growth in the bid would result in a lower level of subsidy during the contract period. Although the operator does not receive any fixed annual payment, it is important to note that public transport is characterised by a substantial level of captive passengers. Therefore, the variable revenue is less variable than it might seem, making an incentive system based on rewarding revenue/patronage growth less unpredictable and risky than may appear at first sight.

The operator is allowed during the contract period to alter the original service specification in order to respond to changing demand. The freedom to alter service quantity is limited however. Normally, a reduction of supply on one bus route has to be compensated by an increase on another. Reducing services beneath the original bid is only possible with a special exemption issued by the board of the transport authority after hearing the advice of the passenger advisory committee (composed of representatives of all passenger advocate's organisations in the area), and of the advisory council of aldermen of the municipalities concerned agree.



(non-binding) advice to the operator – although political reality could be different. In addition, the authority will perform a check whether the proposed timetable modification complies with contractual regulations.

The contract type presented above was implemented for all three suburban bus concessions around Amsterdam city centre. Whilst the fundamental principles underpinning this superincentive franchise remained the same, there has been some evolution taking into account experience on the ground. The complex interplay of local political wishes, the complexity of this kind of contracting, and the inherent preference of political authorities for certainty has gradually led to a more prescriptive stance from the authority and recently also to more traditional incentive mechanisms.

The first results were encouraging as the bids for Zaanstreek (2004) and a year later for Waterland (2005) were impressive. In the first round of tendering, and an increase of 20 to 50% of bus hours was realised, with operators promising an increase of 25% to 35% of passenger revenues. Improvements were made in the quality of the public transport product too, including new and fully accessible vehicles.

However, this first tendering process itself was perceived by the authority to be less successful in three ways:

- The terms of reference combined with the highly sophisticated mathematical evaluation process were perceived by the bidders to be very complex as bidders experienced difficulties in trying to understand what SRA was really asking for;
- The bids themselves were also very complex and necessitated a complex, labour-intensive bid evaluation process for SRA's civil servants;
- In terms of implementation, the very substantial growth in supply and the deployment of a completely new bus fleet also led to a difficult transition from incumbent to new operator.

This led in the next tendering round (Amstelland-Meerlanden contract) to a more 'controlled' form of competition with stricter boundaries set by the board of the transport authority. The schedule of requirements had less objectives-based ('functional') requirements and more technical requirements, i.e. less abstract formulations of service objectives (accessibility goals and so on) and more detailed services specifications (routes, frequencies and so on). This effectively limited the freedom of the bidders during tendering and put more emphasis on redevelopment during the duration of the contract.

To prevent problems with the implementation of this large concession, SRA demanded that bidders develop a detailed implementation plan to be included in the tender documents – points were also awarded for this in the evaluation of the bids. In addition, SRA assigned a civil servant to follow closely the implementation phase by the operator. Results in terms of offered supply were high. Incumbent Connexxion won the contract again, promising a 60% increase in services and a 50% increase in revenues, against a 5% reduction in subsidies. In addition, Connexxion promised several quality improvements, including a fleet of new buses.

Area	Call for Tender	Awarding
<ul style="list-style-type: none"> • 1.5 million inhabitants in the entire region; including 825,000 in the city of Amsterdam which is not part of these contracts (although buses of these contracts do operate to and from Amsterdam) • Bus (three contracts) 	<ul style="list-style-type: none"> • One network • Objectives based (so-called 'functional tendering'), but increasing level of detail in the most recent tender • Incentives linked to realised passenger revenue • Fixed annual maximum subsidy • Assets owned by Operator 	<ul style="list-style-type: none"> • Competitive tendering • Complex multi-criteria evaluation (in the last Waterland tender: 45% quantity of service (bus hours), 15% revenue growth and marginal cost per bus hour, 30% quality aspects of service provision (quality of network and timetable, comfort of rolling stock, etc), 10% environmental aspects of rolling stock.
Development	Incentives	Enforcement
<ul style="list-style-type: none"> • Operator may in principle freely change services in order to meet the specified objectives ('functional' specifications), after consulting with passenger councils • Obligation to produce total number of bus-hours included in the bid 	<ul style="list-style-type: none"> • Operator takes revenue risk • Revenue multiplier paid by tendering authority, calculated on the basis of promised revenue growth in bid, and paid out according to realised revenue growth 	<ul style="list-style-type: none"> • Monitoring by customer satisfaction index with bonus/penalties • Monitoring of realised services and punctuality with penalty for poor performance

The municipalities also have the right to come forward to the operator with proposals on service changes or fares offers to attract more travellers. In all cases, the operator will have to submit any proposed timetable modification to the passenger advisory committee as well as an advisory committee of councillors in all the municipalities. These committees will give

One of the aims of the adopted contracting approach was to stimulate creativity and customer focus from operators. After a few years, this seemed to be successful as new initiatives by operators were indeed witnessed. Real revenue growth figures in the three tendered areas initially proved to be high, in line with the growth promises. The growth observed in the first contract years (around 9 and 15%) took place at time when new marketing, promotional activities as well as autonomous action on service provision by the operators could be seen. These were mainly specialised bus routes, such as a school bus to avoid overcrowding on conventional commuter bus services and the opening of several new bus routes aimed at commuters. However, there was a substantial fall in ridership in 2008, reportedly due to a series of major national public transport strikes and perhaps also because of the wider economic downturn. As a consequence, the Waterland contract probably experienced losses in 2008. In such cases, the 'superincentive' mechanism can prove to be problematic, as a decrease in passenger revenues will also lead to a decrease in subsidies, reinforcing the decline. The question that follows is whether the contract is able to cope with significant external factors on ridership levels, as the behaviour of the operator at the time was, according to the City Region, proved to focus more on cost cutting than on increasing patronage.

The retendering of the Zaanstreek area (2010) led to only one bid being delivered, by incumbent Connexxion. They promised to increase supply by 9% and purchase new vehicles. Note that the authority had increased the available budget by 20% for this tendering round and had chosen to use a mixed contract with a 60% lump sum payment and 40% based on super-incentive payments related to passenger revenue. The 100% super-incentive regime was considered ill-suited for the local market conditions as a large proportion of the services were social rather than commercial and that growth was not to be expected on those services, unlike the major routes connecting the regional centres and Amsterdam.

The Waterland contract has meanwhile been retendered too in 2011. Again, a superincentive contract was used, with the same

principles as for the previously tendered contracts, illustrating the satisfaction of the transport authority with this approach. The contract period is 2012-2019 with an option of two additional years.

The freedom for the operator was, however, reduced compared to the previous Waterland contract due to the aforementioned reasons and due to the introduction of R-net (see previous chapter) for which routes and frequencies were described in more detail by the public transport authority. Due to earlier losses in the contract, as mentioned above, the City Region expected a less favourable result in this tender, perhaps even leading to a decrease in bus hours supplied. However, the tender was won by a new entrant to the Dutch public transport market, EBS (owned by the Israeli bus operator Egged), which offered the maximum number of bus hours that was allowed in the tendering procedure, and thus significantly more than what was expected by the City Region. Although this rose questions as to its financial sustainability, it was accepted, as it would be hard to prove that the bid was unrealistic. Furthermore, a promised increase of bus hours proved politically more appealing than the expected decrease. As it happened, the bid did turn out to be problematic with EBS eventually making significant financial losses. The route network had subsequently to be redesigned in agreement between the City Region and EBS to improve efficiency. Despite some negative reactions in the media and from local politicians, the City Region considers that some network inefficiencies could be removed and that the new network provides improved services for a large majority of passengers with only a small percentage of passengers facing a decrease in service supply. As the contract does give significant design freedom to the operator, the negotiations that took place with the operator were needed more to allow political influence on the new network than for pure contractual reasons.

The contracts in the Stadsregio area show the strong potential of this type of contracting in good bus territory. The financial troubles in the most recent Waterland contract point at the need for a tendering strategy, awarding mechanisms and incentive regimes that are well thought through to guarantee success and avoid unrealistic bidding. At the same time, the approach chosen delivered impressive results in term of increased supply while the superincentive seems to have worked in several contracts to

incentivise operators to actively redevelop supply.

Service design by the operator under net cost contracting



The City Region of Arnhem Nijmegen (a cooperation of 20 municipalities) was until 2014 the competent authority for the public transport in the cities of Arnhem and Nijmegen and the surrounding area, comprising medium-sized suburban towns. Due to legislation that recently abolished the City Regions, the responsibility for public transport in the area was

transferred to the province of Gelderland at the beginning of 2015.

The area has a high population density and the previously rural area in between the cities of Nijmegen and Arnhem is increasingly turning into a suburban area. Public transport in the area is well used and has a relatively high cost coverage of approximately 55%. The City Region invested heavily in bus infrastructure on the main bus routes in and in between the major cities in the years leading up to the tendering. After tendering, the City Region (and now the province of Gelderland) continued this effort.

The 2011 tendering procedure was the second one for this area. While the previous contract encompassed only the bus and trolleybus network of the area, the new contract now also includes one regional railway line between Arnhem and Doetinchem. This railway line (Arnhem – Doetinchem – Winterswijk) is a very special case in the Netherlands as part of this line fell under to the jurisdiction of the province Gelderland, while another part of the line was the responsibility of the City Region Arnhem Nijmegen. For political reasons, the railway services on this line were split in two contracts. The through services Arnhem – Doetinchem – Winterswijk were included in the multimodal Veluwe contract (bus + train) that was tendered by the province of Gelderland prior to the Arnhem Nijmegen contract. This contract is now operated by Arriva (Deutsche Bahn). The weekday-only 'short' services Arnhem – Doetinchem were included in the Arnhem Nijmegen contract, tendered by the City Region. Requirements in the contract documents were co-ordinated between both authorities to make sure the services in both contracts remained similar, with integrated tickets and fares. In order to make sure the quality of the trains of both operators is similar, and that trains of both operators are compatible with each other (which can be useful in case of service disruptions), the same type of rolling stock is used in both contracts (Stadler GTW). Therefore, the operator of the Veluwe contract (which was tendered first) did not only have to order trains for itself, but also had to pre-order the same type of trains for the Arnhem Nijmegen contract. The contractual details of this order were then finalised in negotiations between the City Region and the Swiss train manufacturer Stadler and then made part of the tender documents of the Arnhem Nijmegen tender.

The winning operator of the Arnhem Nijmegen contract had to buy these trains according to these contractual agreements.

The freedom for the operator to autonomously redesign services is rather limited in this case, both during the tendering procedure and during the contract period, despite the fact that the contract in principle allocates the design function to the operator. Examples of the level of specification in the call to tender include:

- The existing network and timetable formed the basis for the tender, bidders were not allowed to completely redesign the network;
- Use of natural gas buses on the entire bus fleet (except the trolley buses) was compulsory;
- Use of the authority-owned brand Breng was compulsory;
- The means for providing passenger information were described at a rather high level of detail.

Area	Call for Tender	Awarding
<ul style="list-style-type: none"> • City Region Arnhem Nijmegen • 740,000 inhabitants • Two cities (Arnhem and Nijmegen), smaller suburban towns • Regional train (one railway line), trolleybus (Arnhem) and bus • Contract duration: 10 years (2013 – 2023) 	<ul style="list-style-type: none"> • One integrated network • Relatively high level of specification in the Call for Tender • Assets owned by operator 	<ul style="list-style-type: none"> • Competitive tendering • Complex multicriteria award based on both price (total subsidy as well as prices for possible service extensions) and quality (several plans, including quality of PT network and quality of passenger information)
Development	Incentives	Enforcement
<ul style="list-style-type: none"> • The operator is primarily responsible for developing the PT product • However, the freedom for the operator to change the PT product on its own is limited • Changes in the PT product are developed and decided on in cooperation between authority and operator 	<ul style="list-style-type: none"> • Revenue risk is with the operator • No additional incentives 	<ul style="list-style-type: none"> • Monitoring of realised services and punctuality with penalty for poor performance • Penalties can be applied to any item where the operator does not comply with contract regulations

Instead of giving the operator freedom to autonomously develop supply during the contract, the authority opted for a hybrid development model, in which operator, authority and municipalities (who are responsible for the infrastructure) work together in developing the public transport product. It is one of the many examples in the Netherlands where such a hybrid development model emerges. In some recent cases, a 'development team' (ontwikkelteam) is introduced as a platform in which this joint development can take place. Although the Arnhem Nijmegen contract does not include a fully institutionalised development team (except for the railway line Arnhem – Doetinchem, as explained below), development does take place in close co-operation between these parties. The authority and operator have frequent meetings to discuss, e.g.,

timetable changes. Changes in the network are discussed also with municipalities and passenger advocacy organisations.

The reasons for opting for a hybrid contract are rather similar to choices seen elsewhere in the Netherlands where tendering practice over the last decade had left a feeling amongst authorities that the operators do not sufficiently use the development freedom allocated to them or used it to cut costs rather than to improve service attractiveness for passengers. Thus, an increased involvement of the authority was deemed necessary in order to stimulate development and secure the public interest. In addition, another reason to limit the development freedom for the operator has been the heavy and continued investments in bus infrastructure. The City Region wanted to prevent a situation where significant public investments were made into bus infrastructure after which an operator would not use, or would underuse, this infrastructure.

This does not mean that bidding operators had no development freedom at all during the tendering procedure. There were eight qualitative awarding criteria in which bidding operators could score awarding points. These criteria included:

- Network design (although the existing network and timetable was the basis, operators had some limited freedom to suggest changes to routes);
- Proposals for future network developments, based on expected infrastructure developments in the next years;
- Comfort for the passenger in the rolling stock;
- Passenger information;
- Marketing and marketing campaigns;
- Implementation of the brand Breng on bus stops and transfer points;
- A participation plan in which the operator was awarded additional points for an increased cooperation with local organisations (schools, businesses, NGO's, etc.) Scoring a low

mark on this criterium could lead to a rejection of the bid.

Two operators placed a bid: incumbent Hermes (Transdev (FR))¹ and Keolis (FR). Arriva (Deutsche Bahn (DE)) also prepared a bid but decided not to deliver the bid, stating they found the risks allocated to the operator in the contract to be too high, especially those linked to the maintenance costs for the ageing trolley infrastructure. The risks for bidding operators were also increased because of changes made in the pension schemes of the incumbent during the tendering phase, and which could have significant impact on the business case of bidding operators. Incumbent Hermes eventually won the contract.

The City Region was satisfied with the result: the tender led to a small increase in supply for a lower subsidy. Several relatively small improvements were also made to the network.

As a result of the participation plan, Hermes offered to start several co-operations with regional companies, schools, universities and NGO's. The most prominent example is the clean teams in which Hermes works together with two regional care facilities to provide jobs to people with a mental disability. These people work as cleaners in both bus depots and bus stations.

In a recent evaluation of the contract the authority, the operator, municipalities as well as the regional passenger advocacy organisations say they are mostly satisfied with the way Hermes carries out the contract. The new route network is generally seen as an improvement over the old network. Most stakeholders indicate they are satisfied with the way they work together with Hermes in developing the network as well as in managing operational issues (such as temporary route changes

¹ Previously there were two contracts in the region, one for Arnhem and surroundings and one for Nijmegen and surroundings. Hermes was the incumbent for the Arnhem contract, while Novio (also owned by Transdev) was operating the Nijmegen contract. Novio merged into Hermes after Hermes won the new Arnhem Nijmegen contract.



due to road works, etc.). While this is mostly true for the larger municipalities, some smaller municipalities complain about a lack of communication from Hermes about upcoming timetable changes. The clean teams are highly appreciated by most parties but other activities promised by Hermes in the participation plan remain less visible or were not realised at all.

Passenger numbers have been fluctuating over the last two years but generally seem to be on the rise by a few percent. Passenger revenues, however, decreased slightly until a much-discussed increase in fares took place in 2014, ultimately leading to an increase in passenger revenues in line with passenger numbers. Passenger satisfaction is on most aspects on the rise too.

One of the problems in the current contract is that the performance of the bus lines in terms of punctuality and numbers of cancelled journeys remains below contractual standards. This was especially the case in the first months of the new contract when there were significant problems with both bus and train. After a timetable revision in the middle of the first year performance improved significantly but still does not meet contractual demands. Here, as in several other cases in the Netherlands, authorities appear reluctant to enforce fines when performance levels are below contractual standards.

Hermes is realising a better performance on the rail line in the contract than the previous operator. This single track line was previously notorious for its many delays and cancellations. However, since Hermes (and Arriva for the Gelderland contract) took over the line, performance increased significantly and is now up to contractual standards – despite the complexity of

two companies running highly frequent trains together on a single track line. The operators and authorities mention this is partly due to the good cooperation between these parties and infrastructure manager ProRail, who work together in a special 'team' to improve performance on this line, design timetable improvements and discuss future service and infrastructure enhancements. This approach has led, for example, to establishing concrete and extensive operational handling scenarios in case of delays or disruptions.

Since the start of the contract there have been several developments of the bus network. This includes the introduction of a new 'HOV' (High Quality Public Transport) bus line between Arnhem and Nijmegen following the completion of the infrastructure for this line (which was already in development before the current contract), as well as some smaller changes. Some of these changes were initiated by Hermes, others by the City Region or municipalities.

In the evaluation of the contract, the authority and several municipalities say that they are mostly satisfied with their co-operation with Hermes, and indicate that the operator does actively work on redeveloping the bus network. However, some of these actors state that proposals made by Hermes sometimes seem to be motivated by cost reduction instead of aiming to attract more passengers and developing marketing activities accordingly. These remarks are similar to experience in other contracts where cost cutting often proves more attractive for the operator to realise than getting more passengers and revenues. However, comparing the developments in this contract to other Dutch contracts does give the impression that Hermes is actually more active in these passenger-minded fields than in several other Dutch contracts. The high rate of cost coverage in this area and the active involvement of the authority are probably also



contributing to Hermes actively redeveloping the bus network.

Service design by the authority under gross cost contracting



The provinces of Groningen and Drenthe are an area that is mostly rural with a rather low population density by Dutch standards. The two main cities are Groningen and Assen. A particularity of this area is that the two provinces, as official public transport authorities, created a combined public transport bureau in order to tender, manage and market public transport services by bus in their

areas. This includes the design of the public transport network and the determination of its fares.

Area	Call for Tender	Awarding
<ul style="list-style-type: none"> Two provinces: Groningen and Drenthe 1 million inhabitants Mostly rural but with two major cities (Groningen, Assen) 2009 – 2015 or 2017 Urban bus (Assen, Groningen), and regional bus 	<ul style="list-style-type: none"> One bus network (railway services were tendered earlier separately, two longer-distance bus services are also tendered separately). Small-scale transport (demand-responsive) and express bus routes tendered separately High specification level of routes, stops and frequencies Assets owned by operator 	<ul style="list-style-type: none"> Competitive tendering Complex multicriteria award (price per timetable hour, various plans)
Development	Incentives	Enforcement
<ul style="list-style-type: none"> Authority is responsible for developing the public transport product (design of route, frequencies, fares) Operator is responsible for operational plans (scheduling, etc) Operator has no freedom to change the services on its own but may suggest 'business cases' for service improvements 	<ul style="list-style-type: none"> Revenue risk for Authority Bonus linked to passengers' perception of operational quality 	<ul style="list-style-type: none"> Operational quality monitoring with penalties Penalties maximum 2% of total subsidy

The public transport bureau lets several public transport contracts:

- Regular public transport services (both urban and regional) are contracted as a single 8-year (2009-2017) gross-cost contract

with all routes, stops and frequencies decided by the transport bureau. The contract initially lasted 6-year, with a pre-defined extension option of 2 years that was used, as the authority was satisfied with the current operations of the contract. This contract was won by Qbuzz – the largest contract to be won by this new company at that moment.

- Regional express services serving two relations not well served by rail are provided for in a separate contract (2009-2015, also extended with two years), which was won by Arriva.
- Additional 'small-scale' services are tendered in six separate regional gross-cost contracts (2009-2014, extended with three years). These are the Regiotaxi (providing in this area taxi access to main public transport services and also door-to-door services for shorter trips that are not served by the main public transport routes, both at a premium fare compared to regular public transport), neighbourhood buses, regular bus lines operated by minibuses and 'line-taxi' services (taxi services operating on demand on some weaker regular public transport routes in the evening and the weekend). The Regiotaxi-services also include WMO-transport, for which municipalities are the responsible authorities. These contracts were tendered by the public transport bureau together with the municipalities, with the public transport bureau leading the tendering project (the city of Groningen tendered its own WMO transport). Several local taxi companies won these contracts.

Regional railway services in the province are provided under a contract (2005-2020) tendered jointly by the provinces of Fryslân and Groningen. The public transport bureau has no involvement in this contract.

The choice of the public transport bureau to make itself responsible for the design and development of the public transport product and to opt for gross cost contracts is uncommon in the Netherlands as it goes against the more or less general consensus that this is best carried out by the operator—



even though the freedom for the operator to do so is in many areas in the Netherlands often rather limited in practice.

This choice was partly caused by disappointments over the outcomes of the previous contract (which had not been tendered). That contract had given the operator more freedom in network design but the operator was perceived to have responded too passively and not taken advantage of the opportunities to bring commercial flair and innovation. However, budget cuts – coming from the transport ministry – that had to be imposed upon the operator at the time may also have been one cause, together with the lack of true incentives in the former contract.

The current regular public transport services contract (2009-2017) includes a number of incentives. These are essentially bonuses linked to specific aspects of the customer satisfaction enquiry. Held at the national level, this so-called 'customer barometer' is completed by approximately 80,000 passengers and is managed by the Knowledge Platform Traffic and Transport (KpVV), which is a public body working for the transport authorities; the aspects selected are those on which the operators have some influence, such as cleanliness, friendliness of the driver, driving style, information and punctuality. The bonuses are paid when customer satisfaction exceeds pre-set targets. The operators are required to deliver a yearly quality plan that should explain how they intend to realise the targets. The contract also includes an extensive list of financial penalties linked to the non-realisation of specific contractual agreements such as the realisation of the quality plan, the usage of inadequate vehicles, the non-respect of specific requirements pertaining to the personnel, punctuality standards, information on board, etc. Most of these penalties amount to about 250 euro per case up to a maximum of 25,000 euro per category, of which there are 15.

Although the contract is gross-cost and the public transport

bureau is primarily responsible for the development of the public transport product, the operator is nevertheless expected to play an important role in this development. For instance, although the public transport bureau decides on lines, routings and frequencies, it lacks the manpower, knowledge and specific software to develop the exact timetables, staff and rolling stock rosters. These are developed by the operator. Moreover, the public transport bureau expects the operator to critically review the plans made by the public bureau and actively suggest further service innovations.

In order to incentivise the operator to do so, and to increase flexibility in the contract, additional separate business cases can be negotiated during the contract period. This feature is meant to incentivise the operators to suggest services that could generate more business or profits or contribute to a better realisation of policy aims. Several ways to allocate cost and revenue risks to operator and authority can be used in these additional business cases; the aim being to find ways that should maximise the incentive for the operators to innovate. This business case approach has been used several times in the current contract. One of the most prominent examples is the introduction of *Qlink*, a form of High Quality Public Transport in the Groningen urban area.

A business case was made for the introduction of these high-frequency bus lines, which are operated with specific rolling stock for each line, easily recognisable through the application of line colours in the bus liveries – a feature that is contrary to Britain very uncommon in Dutch public transport. However, the business cases were only used to determine the costs of the new bus lines and to remunerate Qbuzz for these costs, and not to allocate passenger revenues to the operator as originally intended. In all these business cases the public transport bureau remained responsible for passenger revenues.

Passenger numbers were on the rise in the first few years of



the contract. However, 2013 saw a sharp decrease in passenger numbers in the main bus contract (passenger numbers kept increasing in the express bus contract).

According to the Public Transport Bureau, this decrease was caused by a combination of budget (and service) cuts, an increase in passenger fares and the ongoing economic crisis. The budget cuts and increase in fares were needed because the Public Transport Bureau has had a financial deficit since 2011, a situation that became financially unsustainable. This was caused by costs being higher than anticipated, and passenger revenues not keeping up with passenger numbers, which was partly due to an increase in students travelling with a nationwide student pass, which does not automatically lead to an increase in revenue for the authority. The budget cuts and fare increases led to significant political discussions in both provinces, while the Public Transport Bureau – being a separate entity – had until then been able to maintain a position somewhat further away from day-to-day political turmoil.

The experiences with the six small-scale contracts are mixed. The coordination between the Public Transport Bureau and the municipalities proves to be time consuming due to the diversity of local wishes and policies.

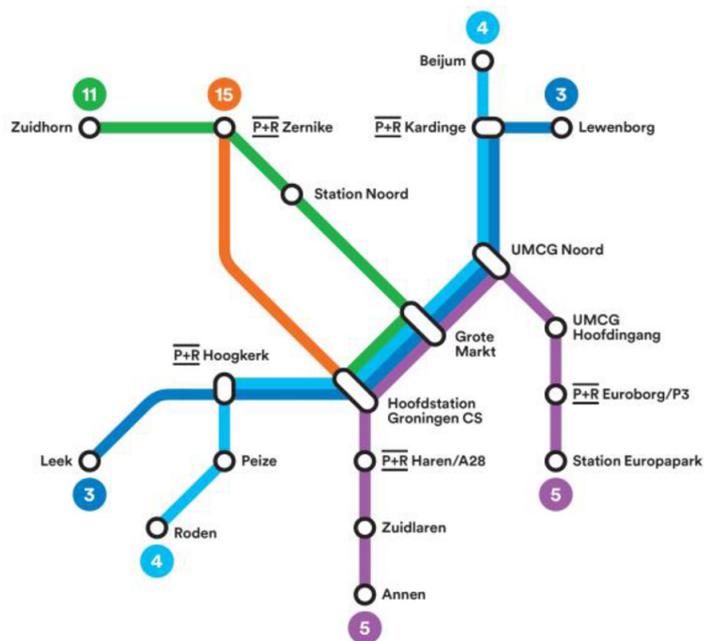
Year	Public Transport	HOV (High Quality Transport)	Small-Scale Transport	Total
2010	37,599,058	746,229	885,938	39,231,225
2011	38,077,424	921,649	1,015,147	40,014,220
2012	38,322,126	978,070	908,855	40,209,051
2013	36,371,998	1,131,609	692,857	38,196,464
2014	35,913,366	1,264,593	725,311	37,903,270

This level of coordination between various types of passenger transport services is actually rather exceptional in the Netherlands. The advantage for each municipality is a guarantee of a better provision of regular public transport in the evening (even if provided by taxi rather than by bus) than would have been the case otherwise and the possibility to avoid some of the costs of some other specific demand-responsive services by making use of these taxi services instead.

In general, the public transport bureau is satisfied with the current contractual setup. Because of this, and due to the difficulty of tendering a new contract in the coming years due to major infrastructural reconstructions impacting the network, the public transport bureau decided to extend the current contract again with another two years. Other operators have taken the public transport bureau to court over this decision, as this was not envisaged in the original contract. The court, however, had upheld the public transport bureau's decision, allowing the contract extension. As part of this, Qbuzz will invest in new and more sustainable vehicles, including 50 Euro-6 buses and two full-electric buses.

While there was uncertainty about the extension, the public transport authority did start with preparations for a new tender. This started with the adoption of a preliminary policy document in which the main principles for the next tenders were laid out. The relationship between the public transport bureau and the operator would, according to that document, remain roughly the same in a new contract: the public transport bureau would remain mainly responsible for the development of supply and the new contracts would be gross cost again. The public transport bureau, however, would wish to increase incentives to future operator(s) to more actively participate in the development of public transport supply and maintain high standards of operational quality.

In the light of decreasing budgets and increasing costs, the focus of the public transport bureau is increasingly on patronage growth on the main routes, and on finding cost-efficient alternative means of transport on routes with low passenger demand. This is very similar to the focus of many other public transport authorities at this moment (also see paragraph 'Typical Supply Level' in chapter Public Transport in the Netherlands), as increasing cost coverage from passenger revenues is seen as crucial for sustaining the quality of the public transport network in the future.



The Qlink network



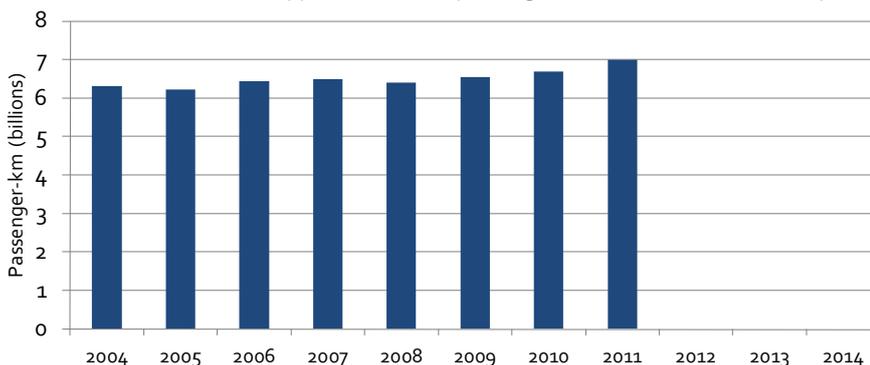
Outcomes

- *Public transport statistics are unfortunately inadequate, however regional bus patronage does not appear to have either significantly declined or increased and cost coverage has probably increased.*
- *The quality of public transport has improved in the last decade (e.g. new vehicles, real-time information, increased accessibility).*
- *The OV-chipkaart system allows for more tailor-made regional fares, while still retaining nationwide ticketing integration.*
- *Tendering has led to increased efficiency. Recent tenders show that market prices have now bottomed out.*
- *Passenger satisfaction has increased since tendering started, rising from an average of 6.8 (2001) to 7.5 (2014).*
- *Competition for contracts varies. Tenders mostly attract two to four bidding operators; however, tenders with only one or even zero bidding operators have also occurred.*

Competitive tendering has now been used for about fourteen years in the Netherlands. While tram and metro in the urban core of the large urban areas have been excluded from tendering, almost the whole of the rest of the country has now been subject to competitive tendering. Coming from a non-competitive environment, the introduction of competitive tendering has resulted in substantial efficiency improvements. Labour productivity has risen considerably. New bus fleets with high environmental standards are now used everywhere. The output of the sector in terms of services offered to the population has also risen (by about 13% between 2000 and 2009 [Source: KpVV, 2011]). On the other hand, the subsidy per trip rates have not changed much and passenger numbers have remained roughly stable since the introduction of competitive tendering.

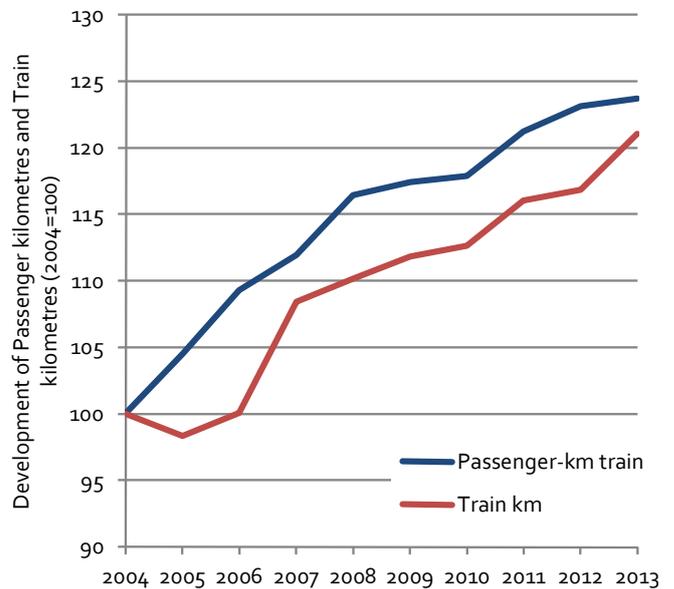
Passenger kilometres in public transport

Public transport ridership figures from the years 2000 to 2011 show a slight increase in passenger-kilometres travelled on regional public transport (bus, tram/light rail and metro), rising slightly from 6.4 billion passenger-km in 2000 to about 7 billion passenger-km in 2011, which corresponds to an increase of about 9% in 11 years (Source: KpVV, 2014). At the same time, these figures are contradicted by the nationwide mobility survey that shows a slight decrease over the same period (see also the paragraph on modal shares). More recent data is regrettably not available (see graph); a paradoxical fact also mentioned by the Knowledge Centre of the Ministry of Infrastructure and the Environment in its last report, especially in a period where the introduction of the *OV-chipkaart* system should have led to improved data collection. The problem is that the current system still lacks a standardised way of keeping track of all data, whereas the previous *strippenkaart* system did estimate passenger-kilometres on the basis of a national passenger survey that was needed for the apportionment of passenger revenues.



Passenger kilometres in bus, tram and metro (billion km), based on WROOV-data.

Data is available, however, for the national railway network, although again not for the most recent year. Here, a significant increase in passenger kilometres can be observed between 2004 and 2013. This increase is very similar to the increase in train kilometres in the same period.



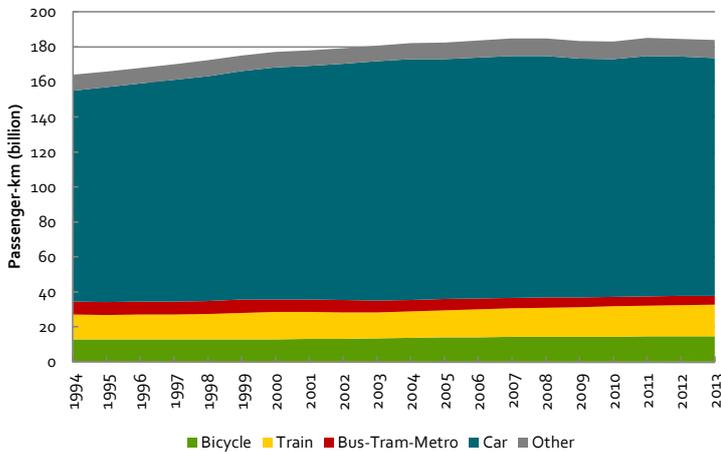
Development of Passenger kilometres and Train kilometres (2004=100)

Modal shares

Data on modal shares can be found in the yearly national survey on transportation (OVIN), which is based on a large number of sample of individuals. From this source, the growth in car usage in the Netherlands is similar to what can be seen in most European countries over the same period. The number of passenger-km by rail increased slightly faster than the total number of passenger-km on all modes, leading to a slight

increase of rail in the modal share. By the end of the period, rail's share of total passenger-km amounted to about 10% of the total. Interestingly, and differently from many other countries, the bike has a similar modal share (about 8%), a share which has been rather stable in the last twenty years. According to this source, the number of passenger-km by bus, tram and metro has been slightly decreasing since the beginning of the century.

With total mobility increasing, the modal share of bus, tram and metro has been decreasing significantly: from 4,1 % in 2000 to 2,8 % in 2013. This finding conflicts with the aforementioned figures from the *Strippenkaart* data according to which the number of passenger-km by bus, tram and metro were increasing slightly between 2008 and 2011, illustrating the current lack of reliable and consistent data on passenger numbers and passenger-kilometres.



Graphical representation based on KiM (2014), *Mobiliteitsbeeld 2014*

Measured in number of trips, the modal shares of train and bus/tram/metro together amounted to about 5%, and that of cycling to 26%. Walking represents about 19% of all trips.

Ticket Prices

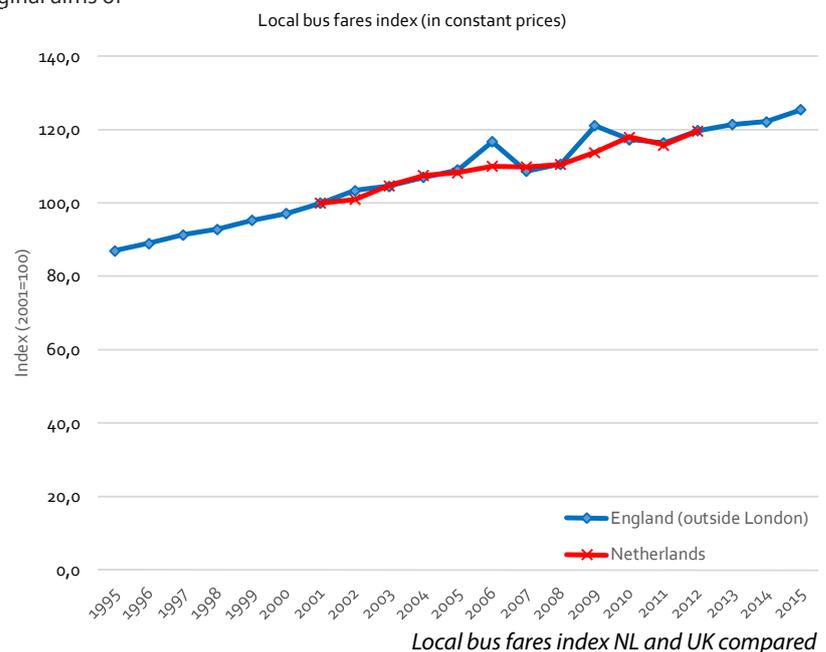
As explained earlier, a nationwide smart card system (*OV-chipkaart*) was gradually introduced between 2005 and 2011, replacing the *Strippenkaart* system. This new system allowed maintaining almost full ticketing integration in the Netherlands, as passengers can use almost any public transport service in the Netherlands with one single *OV-chipkaart* when using its stored-value or auto-reload function. The introduction of the *OV-chipkaart* also gave authorities and operators more freedom in determining local fares, and this was one of the original aims of introducing the smart card. However, authorities decided to keep a uniform fare structure throughout the country. The former zonal fare system was replaced by kilometre-based regime where the price per kilometre is determined by either the authority or the operator within the contractual boundaries set by the authority. Note that in most cases, there is not much freedom for the operator to amend fares. The political sensitivity of fares makes authorities reluctant to give freedom to operators on this item. Some observers do, however, recommend to grant operators more freedom such as to generate more innovation and more revenues that could be used to develop further service improvements in the context of tendering. In addition to the kilometre fare, a nationwide discount scheme for children and elderly remains available. The former uniform zonal seasonal tickets (*Sterabonnementen*) that existed throughout the whole country remained

only in some parts of the country and was partially replaced by various regional rover tickets and discount schemes on the *OV-chipkaart*. This has led to more tailor-made local products although it also reduced transparency for some passengers travelling across the country. A working party within the public transport sector is currently discussing this issue in view of restoring more national integration.

In the first decade of this millennium, the *Strippenkaart* system had, under the tendering regime, seen a substantial increase in fares, totalling 46 % between 2001 and 2012, which is 19,7% when corrected for inflation and significantly higher than the increase in car usage costs. Note that this is, in the same time period, exactly the same fare increase when corrected for inflation as that in England outside London – the area of the UK which is most comparable to the Netherlands in terms of population density².

In the first years of the *OV-chipkaart*, the kilometre fares were mostly lower than the average price per kilometre with the now defunct *Strippenkaart* system. In the first year after introduction (2012), however, there was a significant price hike averaging almost 10%, even up to 20% in some contracts. In the next year (2013), fares increased significantly again, averaging more than 5%. From then on, the kilometre fares became rather similar to the prices with the *Strippenkaart* system. In 2014 and 2015, prices in most contracts increased about 1 to 2% per year, on par with inflation. There were some exceptions with more significant price hikes – although mostly in contracts where the kilometre fare used to be lower than the national average, so this could be seen as price corrections. Prices now average at about €0.14 per kilometre (in addition to the nationwide base fare of €0.88), with the lowest price being €0.12 euro and the highest being €0.17. Contrary to what is widely believed, the fare per kilometre did not increase significantly because of the introduction of the *OV-chipkaart*: fares are now more or less on par with what customers would have paid with the *Strippenkaart* system.

² Data sources: Panteia (2011) and Department for Transport Statistics (2015)



However, with the change from a zone-based tariff to a kilometre-based tariff, some passengers ended up paying significantly more, and their complaints have probably contributed to this public belief. In addition, the disappearance of the uniform zonal seasonal tickets throughout the whole country and their replacement by various discount schemes on the OV-chipkaart led to significantly higher expenses for some frequent travellers.

Subsidy

There is unfortunately no overview over the total amount of subsidies budgeted to urban and regional public transport for the whole of the Netherlands as the transfers from central government to the transport authorities (brede doeluitkering, BDU) can now be used for transport operation or for investments in road, bicycle or public transport infrastructure.

2004 was the last year in which earmarked public transport operations budgets were paid to the transport authorities, in that year the amount came to € 1.08 billion/year, and this represented 63% of the total costs of production of public transport services (including vehicle investments, but excluding some investments in metros and track infrastructure). In other words: passengers pay on average about 40% of the total costs of public transport. There are no exact figures from recent years. However, it is believed that the cost coverage has increased in recent years. This is probably mostly due to the increased efficiency of public transport companies (see below) and the increased focus on services with high patronage, while at the same time the number of services with low patronage have been reduced. It is estimated that the cost coverage currently is about or above 50 % on average, with significant variations between urban and rural areas. However, production costs have been rising again in the last couple of years (as can be observed from results of tendering procedures), which may lead to a lower cost coverage in several retendered contracts.

National railway services are profitable in the Netherlands (fast and local services on the main routes), but this is based upon infrastructure charges that do not cover all infrastructure costs but only part of the maintenance costs. Regional railway services do not in general cover their total costs of production (with the same low infrastructure charges), although the situation differs widely from route to route.

Efficiency and level of supply

One of the main aims of the Transport Act 2000 was to increase efficiency in the public transport market. This goal has certainly been achieved. In almost every concession that was tendered for the first time, the price per bus hour dropped significantly, which led to significant increases in bus hours in several contracts.

However, prices per bus hour seem to be on the rise again. This can partly be explained because of an increased quality level (see below) and partly because for some time, operators seem to have offered unrealistically low prices per bus hour. This has even led to financial problems in some cases, especially when fuel prices increased significantly around 2008. For example, the

Limburg contracts were renegotiated after the operator came into serious financial trouble. In recent tenders, operators do seem to place more (financially) realistic bids. In addition, many authorities now include incentives in the tendering process to prevent unrealistically low prices, such as a compulsory minimum price. This should prevent operators from getting into financial trouble and should give operators more financial leeway for investments during the contract period. In many cases, however, these higher prices do lead to a decrease in bus services in comparison to the previous contract – which forces authorities to decide to reallocate available budgets, focusing more on lines with high passenger demand, while cutting services on lines with lower passenger demand (see paragraph 'Typical supply level' in Chapter Public Transport Services in the Netherlands).

Quality of supply and customer satisfaction

Another main goal of the Transport Act 2000 was to increase the quality and innovation levels in public transport. Quality has certainly improved in the last decade: vehicles (and bus stops) became more accessible, the average age of buses decreased and real-time travel information has now been implemented nationwide. It should be noted that most of these improvements were implemented because the authorities demanded them in the contracts, or because authorities implemented them themselves; such as the nationwide passenger information database NDOV. There have been less notable improvements that were initiated directly by operators, which partly explains the disappointment felt by many authorities in term of lack of developments on the operators' side (see paragraph 'Role of authority and operator in service design' for more information on this point, as well as on the contractual hybridisation that this caused later on).

The Knowledge Platform Traffic and Transport (KpVV), which is a public body working for the transport authorities, researches yearly the satisfaction of public transport users in a so-called 'customer barometer'. This is done by means of a survey completed by approximately 80,000 travellers. In the years 2001 and 2002, (ie. before tendering), the concessions scored an average of 6.8 out of 10; in the years 2003 – 2006 the non-tendered concessions a score of 7.0 and the tendered concessions a score of 7.3. The 2009 survey showed a national average of 7.2, the 2014 survey an average of 7.5.

Staff efficiency

Operational staff provide approximately 1100 – 1150 timetable-hours per year at public transport operators in tendered regions (out of approx. 2,100 total contract hours, incl. vacation). The rest of the salaried time is used for logistical processes (such as breaks, turn-around time, transfer time from one bus to the other, rolling stock transfers, clock-in time, refuelling, bill payment and grid loss), training and so on.

Level of competition

Competition in the market is highly concentrated in the hands of a few major (mostly global) players, such as Arriva and Transdev, and Qbuzz (owned by the Dutch Railways NS).

In the first few years of competitively tendering concessions there were usually three bidders: Arriva, Veolia and Connexion. This changed around 2007. Around that time all operators suffered significant losses in several concessions, which was partly due to a steep rise in fuel costs. Because of this, operators became more risk averse in bidding for concessions: for example, in many concessions they had (almost) no control over fares but had to carry all risks related to fuel prices. This and other features of the call for tenders (such as exaggerated quality requirements by authorities in some cases) led to lower numbers of bidders for tenders: some have attracted only one bidder, and some even none.

This situation led authorities to try to reduce financial risks for operators (for instance, by agreeing on a national indexation for public transport subsidies, with a heavy fuel prices component), and at the same time to try to prevent operators from bidding unrealistic prices. This approach has led to an increase in the number of bidders again. In addition, the arrival of newcomers Qbuzz and EBS has led to an increase in competition, while the previously small operator Syntus is now bidding on an increasing number of tenders. At the same time, the merger of the parent companies of major players Veolia and Connexion decreased competition, as these two operators never compete for the same contract anymore.

Operators still often choose not to bid on certain tenders, because of (perceived) financial risks, because the contract is too large for the operator to bid on, or simply because they lack the manpower in their bidding team to develop a bid – this is especially true for smaller operators such as Syntus or EBS. Nowadays most tenders attract two to four bidders.

One major problem with the current market situation is the increasing number of court cases after tendering. In the last couple of years, a significant percentage of tenders have led to court cases. Most contract awards are confirmed in court, but there are a few notable exceptions – the most well-known being the Limburg case, where the award to Abellio has been revoked after irregularities in the bidding process had been admitted by their parent company NS. Still, even if when contract awards are not cancelled in court, the procedure itself often leads to a lot of negative press about tendering and public transport, and the court cases sometimes lead to implementation delays.



Comments on contracting approaches and recent trends

- *Contract size, length and scope has been increasing, leading to a decrease in the number of contracts and an increased risk for operators at re-tendering.*
- *Significant diversity in approaches to contracting – including contracting of whole networks (rail and bus) and experiments with integration of social, disabled and educational transport, as well as different financial mechanisms and incentives.*
- *Trend towards contractual specification of service detail in response to perceived risks and uncertainties involved in objectives-based contracting, however, new hybrid contractual approaches have also appeared to include greater partnership and co-development of networks between operators and authority.*
- *Clever monitoring and contract management, based on adequately skilled authorities, required to allow for the development of a trusted partnership with the operators.*

The contract formats vary within the Netherlands from authority to authority. This diversity is a direct consequence of the contractual freedom given to local transport authorities by the relevant legislation. The resulting wide range of experiences makes the Netherlands something of a laboratory for an instructive diversity in contracting practices, even though this may decrease market transparency for market entrants. From the point of view of awarding and contracting practices many lessons have been learned and continue to be learned.

Size, length and scope of contracts

The average size of a contract has tended to increase over the years, both in area covered and in contract length. This had led to a sharp decrease in the number of contracts over the years: in 2005 there were 72 area contracts, while in 2015 there were only 39 such contracts (both numbers exclude contracts for one specific bus or rail line). Contract length has increased too, and most recent contracts now have a duration of 10 years – the maximum contract length allowed under Dutch law (15 years for rail or multimodal contracts).

This move reflects the desire to give operators more revenue risk and freedom on service specification. Larger contract areas are also seen as more efficient (as investments in bus rolling stock can be written off during one contract period, thus decreasing risks for the operator) and as offering opportunities to promote and develop a more effective integrated public transport offer. At the same time, this has made it difficult for small operators to be active on this market, and while it attracted large multinational operators, the number of operators currently active on the market is limited and many of the main ones are subsidiaries of foreign state-owned railway companies as the current market seems less attractive to purely private operators due to the high level of investments required (rolling-stock), the small margins that can be realised and the relatively high risks linked to the contracts. At the same time, the increased size and length of contracts has also created further barriers to entry for smaller operator.

There has also been a trend towards multimodal contracts, integrating regional bus services with regional railway lines. This showed that, although there had always been much focus on connections between rail and bus in the Netherlands, integration between train and bus could be taken one step further. The entire network in such areas is reorganised to maximise synergy between bus and rail. Bus lines running parallel to rail lines are rerouted to connect to and feed the regional railway. Travel information is improved, with more systematic announcements of bus and trains connections in buses and regional trains when arriving at a station.

Paradoxically, area contracting has also led to some service disintegration in a number of cases, as services crossing contract borders have become more difficult to organise than in the previous operator-initiated route-based regime. Several examples of bus routes being sectioned at the border between authorities occurred, but this problem has mostly been solved in recent contracts, usually by assigning a cross-border line entirely to one of the contracts on either side of the border. Because of this, it is common to see buses operating into neighbouring contract areas, which may also lead to integration issues, especially regarding fares: for instance, the season tickets of the 'area contract' operator may not be valid on the cross-border line of the other operator. Passenger information (printed and real-time) used to be problematic in these cases too as passenger information systems were not always compatible between operators. However, this has been mostly solved with the standardisation of passenger information formats and the existence of a national passenger information database, which ensures that passenger information data of all operators can be displayed on the systems of all other operators. A lesson is that while integration can become easier within a contract, it can also become more complex when several authorities are involved and/or cannot agree due to incompatible political or administrative considerations.

There have been some public transport contracts in which Regiotaxi services (flexible transport services for passengers with disabilities) were integrated (see text box in the chapter 'Public Transport Services in the Netherlands' for further information).

However, their integration with regular public transport has not proved very successful so far. Advantages were limited, while the organisation of this integration turned out to be complex as provinces are responsible for public transport while municipalities are responsible for Regiotaxi. In recent contracts, however, there is a trend towards the integration of new small-scale transport services to replace regular bus services on routes with very little passenger demand. This could provide further opportunities for new forms of integration at this level.

Role of authority and operator in service design

Although one of the aims of the introduction of competitive tendering in the public transport sector was to make more and better use of the service design skills of operators, the evolving contracting practices resulted in a situation where many authorities granted only limited levels of service design freedom to the operators in terms of routes, frequencies, fares, fleet specification, etcetera. Nevertheless, a variety of approaches continues to exist. As exemplified earlier, several types of contracts are currently used: gross cost, net cost or superincentive contracts. Several provinces have introduced gross cost contracts with little or no service design freedom for the operator, and this was actually an unintended consequence of the reform. Two provinces (Groningen and Drenthe) have even set-up a common public marketing bureau to directly design and market their transport services. The province of Noord-Brabant, on the contrary, was initially very enthusiastic about giving service design freedom to the operators, but it decided later on to take over all service design tasks away from the operator and to switch to gross cost contracts. However, as the province was not well equipped to carry out these tasks, it opted in the more recent contracts for a hybrid development model based again on net cost contracts.

As a matter of fact, net-cost contracts are the main contracting form currently used, with superincentive contracts used in a minority of cases. Such contracts give both the cost and revenue risk to the operator, together with at least some service design freedom. Success requires the presence of operators that are capable of actively developing their market, using expert marketing skills (market research, service design and service promotion). This points to a chicken-and-egg problem: operators will only hire the necessary personnel and develop a market-driven organisation if there are enough of such contracts around, while authorities will only engage in such contracting if they have the feeling that operators do have the adequate resources to make it a success. Superincentive contracts are less often used and seem more suited to areas with strong bus markets. The experience in the Amsterdam region with this type of contracts seems to indicate that the 'contract awareness' of operators has varied from very active, making use of all contract features (and loopholes...), to too passive by – surprisingly perhaps – not being fully aware of all incentivising content of the contract. This seems to be linked to the fact that both operators and authorities tend to have different teams involved during the bidding and contracting phase and during the operational phase. Another requirement for success is that competitive tendering should be based on a level-playing field, with all or most potential bidders having access to the same market knowledge.

Experience shows that this is not always the case. This has, for example, led the authority in Amsterdam in the course of its tendering practice to reconsider its tendering strategy towards asking for less creativity from the bidders at the time of bidding, while maintaining operator service design freedom during the contract.

One of the main reasons for authorities to opt for a net costs contract is to incentivise operators to attract more passengers through supply (re)development. However, many authorities experienced that net cost contracts could be disappointing in term of developments undertaken by the operator. To counter this, additional financial incentives (positive or negative) were gradually added, based on passenger numbers, passenger revenues or customer satisfaction, with various threshold values triggering the payment of bonus or penalties. Some perceived these payments to be probably too small, with limited incentive power, and disappointments often remained on the side of authorities who perceived the operators as not putting enough effort in the (re)development of supply, even when given the freedom to do so. At the same time, authorities realised they were not equipped to take over these tasks.

A more recent trend to address this issue is the emergence of hybrid contracts in which authority and operator share responsibilities in the development of the public transport product. A growing number of Dutch transport authorities seem to be actually moving away both from contracting with pre-specified services and from fully functionally specified service design freedom towards a 'third way' of contracting based on more hybrid service development models. Such contracts are usually based upon net cost contracts although gross cost hybrid contracts exist too. In such hybrid contracting, authorities, operators and sometimes even third parties jointly develop the public transport product during the contract period, and this is organised via the creation of joint 'development teams'. The contract often includes a rather detailed specification of the services to be delivered in the first year. For later years, this is replaced with a specification of the process according to which operator and authority will co-operate to redevelop and adjust services. A specification of their respective roles and responsibilities in this process is then included. Decision-making is usually very much consensual – a very Dutch way of organising relationships – including an escalation procedure when no consensus can be reached. Even contracts without development teams can contain hybrid elements. In such cases the operator is usually assigned the main responsibility to develop supply, with the authority actively playing a role in development but with a more limited freedom for the operator to redevelop services on its own.

The experience with development teams is still limited and has not yet completely solved the disappointments felt by many authorities over the lack of developments undertaken by operators. However, many authorities do indicate that this is a step towards a better partnership with the operators. Some authorities even added a bonus-malus on 'authority satisfaction', especially in such hybrid contracts, where the operator can earn a bonus (or pay a penalty) based on an evaluation of its efforts to redevelop the supply, and the extent or quality of his interaction

with other stakeholders in this process. This evaluation is carried out by the authority based on predefined criteria. While the sum of the bonus-malus is often rather small, it is calibrated in such a way that the operator can earn back the costs of the manpower used in its redevelopment effort and in the development team.

Incentives, monitoring, enforcement and improvement

The contractual practices combine various forms of risk allocation and sharing, financial incentives linked to performance regimes and penalty clauses allowing the authority to impose fines for breaches of contractual agreements and performance standards. Yet, many authorities are reluctant to actually use stronger enforcement mechanisms such as fines, even when included in their contracts. This is due to various reasons, such as a fear of harming a good relation with the operator (especially in hybrid contracts), doubts about the quality of the data used, lack of manpower to analyse the data, or fear of bad press about public transport in their jurisdiction.

A fundamental issue with network tendering is the questionable ability of operators to make economic forecasts over the length of a contract period (now up to 10-15 years). In traditional contracts, operators were bound to the prices they offered in their original bid, not only for the total amount of subsidy required, but also for the unit prices for changes during the contract period (often via fixed prices per bus-hour) even when changes were authority-initiated. In more recent contracts, this approach is often replaced with a business case approach for major changes, in which the operator and authority develop (and if necessary negotiate) a joint business case for substantial changes in supply quantity, or when other changes with significant impact on the business case of the operator occur (such as the complete redesign of a route network in a city). This is meant to take unnecessary risks away from the operators, which should lead to lower bid prices. Implementing this approach requires knowledge on the authority's side about the production costs of public transport such as to avoid the development of unrealistic business cases. Operators have also learned from the experience of the past years. While some placed unrealistically low bids in previous tendering rounds, leading to problems for themselves, the authority and the passengers, this seems to be less of a problem nowadays. Operators are also learning how to act within the new hybrid contracts. While they have been sceptical about the increasing hybridisation – and this led to a significant amount of clarification questions during tendering procedure about the exact roles and responsibilities of parties – they now understand that they too need to work on building a trusted partnership and developing public transport supply together with the authority.

Good monitoring is essential, both for enforcement and for service redevelopment. This was not always properly organised in the first tendering rounds. The lack of good statistics mentioned above is perhaps also symptomatic for this state of affairs. Things seem to improve since the introduction of the OV-chipkaart and the current extensive usage of on-board monitoring systems. This gives operators more (even real-time) insight in their operational performance (punctuality, cancelled buses, etc.), as well as in passenger demand and revenues.

Unfortunately, the usability of the OV-chipkaart data can be problematic due, for example, to the fact that transfers cannot be properly analysed, or by many (paper) bus tickets sold on the buses not being included. At the national level, despite the standardisation of much data formats, it has not yet been possible to integrate the data from all authorities, resulting in the aforementioned lack (since 2011) of total insight in overall ridership and its development. So, while authorities acknowledge the importance of a good relationship with the operator as well as the need to have knowledge and manpower to realise proper monitoring, the realisation of this endeavour is currently still hampered by the imperfect – though improving – quality of the data. In more recent contracts, operators are required to share data with the authority, often through a web-based interface and usually through nationally standardised so-called MIPOV-reports. However, processing, understanding and using these large and detailed data files requires a level of manpower and knowledge that is often absent on the authority's side such that much data remains unused. Despite these problems, the knowledge on passenger behaviour has improved, helping to (re) develop networks and timetables. The existing data can be used by the party responsible for development during the contract period (either authority, operator or a joint development team), and it can also be used by the authority to redevelop a network in preparation of a new tender round. This approach has been used recently by the provinces of Limburg and Noord Brabant.

Overall, while the quality of the monitoring is one important element in the success of contracting, one should also question an excessive focus on complex financial incentive regimes. In that respect, Dutch practice seems to reveal that a too strict enforcement of penalties according to the letter of inflexible contracts does not always guarantee the best results. Rather, clever monitoring and contract management based on an adequately formulated contractual flexibility and definition of amendment processes, and on an open-minded, constructive and highly-skilled approach to contractual breaches, combined with a credible determination to enforce a quick resolution of performance issues in the interest of passengers, are likely to deliver better results and induce a better partnership spirit than a precise and literal interpretation of overly detailed contractual clauses. The success of such an approach depends highly on the skills of those charged with contract monitoring.

The challenge of learning

Several lessons appear out of the experience from the last years. First of all: there is no panacea. Each type of contracting leads to different challenges and problems, but most have been able to deliver good public transport. Public transport is generally good in the Netherlands. Coming from a non-competitive and lower efficiency levels, the quality of public transport has significantly improved during the last 15 years of tendering and this can also be seen in growing customer satisfaction over the years. At the same time, there are also a few concerns. Tendering has not led to the increase in passenger numbers and modal share that was hoped for, and the increasing number of court cases linked to tendering procedures lead to a decreasing public and political support for tendering. Nevertheless, the current regime has been generally successful in delivering improved public transport

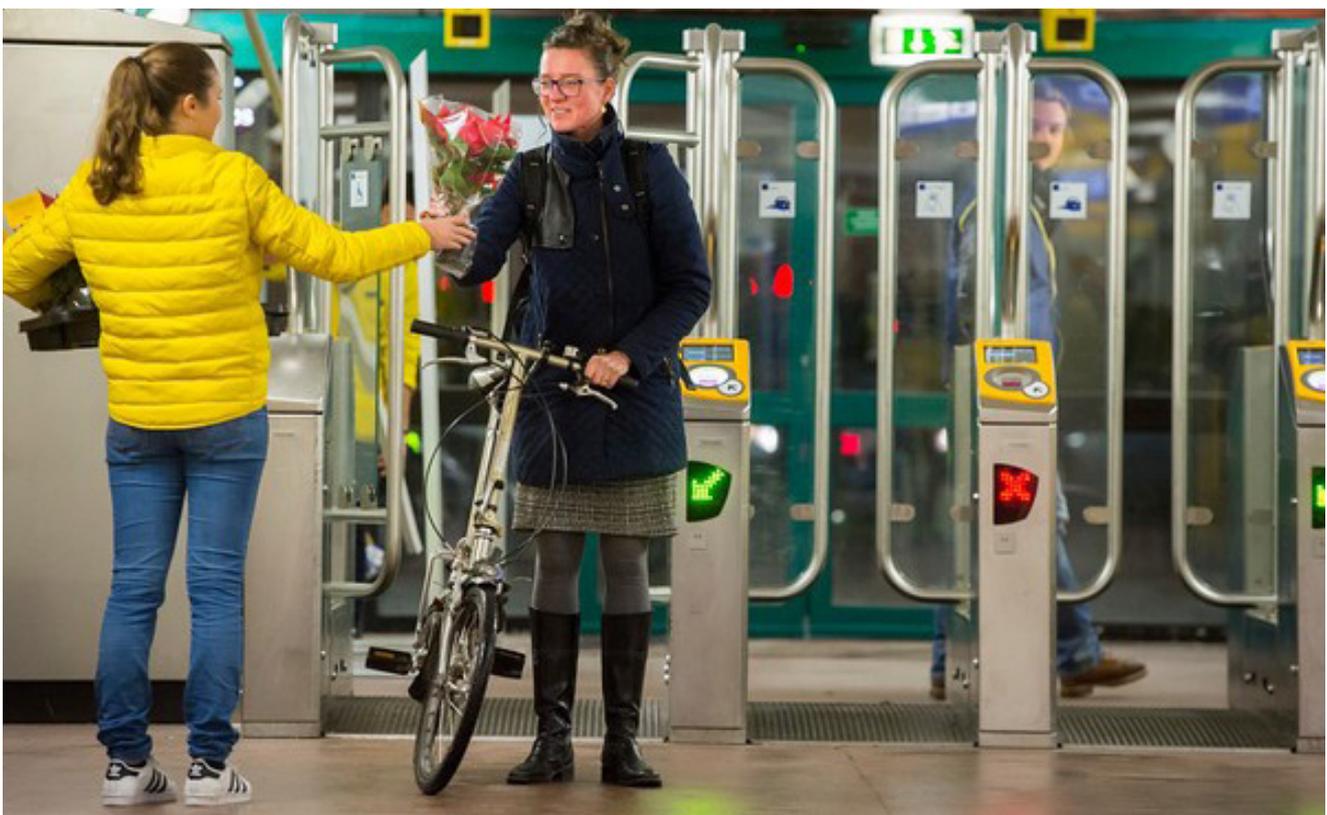
in the Netherlands. The successes, but also the mistakes and disappointments, have led to learning. The resulting diversity of approaches provides a considerable potential for further knowledge sharing.

The original intention of the Dutch tendering regime was to give the operator the freedom to design the public transport product. The partial usage of gross-cost contracts and the increasing tendency towards hybrid contracts in which operator and authority work together on designing the public transport product seem in opposition to this. To understand this, it is important to realise that these developments are mostly the results of earlier disappointments by authorities with performance in the first tendering rounds. Ill-calibrated incentives have led to passive operators in the past in the Netherlands, and in turn to frustrations on the authorities' side. Ill-designed bidding and awarding procedures have led to exaggerated bidding by operators, leading to problems during contract execution. Faced with this, it was a natural reflex for many authorities to increase the level of specification in the next contracting round.

The wide range of contract forms, incentives and enforcement mechanisms that have developed since have not managed to fully eradicate these disappointments. This should also lead to questioning whether authorities do expect too much from the public transport markets and contracted private operators, projecting their own social aims on what they expect should be the markets' possibilities and operators' motivation. Indeed, fundamental misunderstandings can easily occur as operators are essentially driven by a profit motive, while authorities are driven by more varied social and political objectives. In a regime characterised by temporary, competitively tendered monopolies, the contract is supposed to transform the profit motive of the

operator into the socially desired actions formulated by the authority.

Contract formulation and contract management represent main challenges in the approach chosen in the Netherlands, more so than in 'simpler' contracting approaches such as that used in incentivised gross-cost route tendering (such as in London or large parts of Scandinavia). The challenge for all involved then is to build a trusted relationship while maintaining an appropriate level of competitive pressure. The earlier disappointments (and the diversity of approaches used that had led to a lack of market transparency) have led several years ago already to the establishment of a cooperative project focused on integrating the experience of authorities, operators and consultants to bring about qualitative improvements and more standardisation in public transport tendering. Further exchanges were developed more recently to tackle the perceived lack of contractual flexibility and service innovation. Some even suggested to give more space for non-exclusivity of contracts and for autonomous market initiative (coach services on longer distances have even appeared very recently on Dutch roads following the German deregulation of that market). These concerns should not mask that the current tendering and contracting regime allows for a wide range of approaches, including providing for flexibility and creating conditions for innovation. A condition for success, however, is the design of a corresponding approach based on the lessons that can be drawn from the last 15 years. This requires transport authorities equipped with (or hiring) the right level of knowledge and skills for effective contract design, devising well-balanced incentives and clever enforcement mechanisms, enforcing stern contractual clauses when necessary and – perhaps even more importantly – carrying out with determination a clever monitoring and contract management. Only then will a trusted relationship with the operator develop.





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