

**Bachelor Thesis:**

**The Future Role of the Parking Transaction Broker**

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**February 2015**

**Erasmus University Rotterdam**

Key Words: Parking, Transaction Broker, SWOT analysis

## Acknowledgements

First and foremost I would like to thank my thesis supervisor Giuliano Mingardo of the Erasmus University Rotterdam for his encouragements and guidance throughout the entire process of this project.

I would also like to thank all of my interviewees for their time and for sharing their visions with respect to the Dutch parking market and the parking transaction broker. My special thanks go to:

- Rob Ebbing (Partner Spark-parkeren)
- Vladan Jankovic (CEO P1 parking)
- Peter Martens (Director Business Intelligence at Q-park holding office)
- Jeffrey Wolvekamp (CEO Yellowbrick)
- Martin Kruydenberg (Manager Productbureau P1 parking)
- Niels Weterings (Product Manager P1 parking)

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# 1. Introduction

## 1.1 General Introduction

The past decade e-commerce has been growing exponentially with the enormous growth of Internet users worldwide. E-commerce has changed the way companies do business by affecting their entire business models. New competitors such as online transaction brokers create gaps in the revenue model and drastically change competition as we know it. For example, in the hotel branch we can already see the huge impact of such an event by taking a closer look on the website booking.com, an online transaction broker. Hotels all over the world are “forced” to advertise through an equivalent of this website and the result of this is a “leakage” from the hotel industry due to high commissions from transaction brokers which accounted for 5.4 billion dollars in the year 2010 alone (Starkov, 2010).

With the enormous increase in car ownership due to economic development and the growth of urban areas due to urbanization, it is becoming increasingly difficult to find a parking spot in crowded areas. Studies have shown that the average car worldwide is parked about 95 percent of the time (Shoup, 2005). Today’s parking systems are therefore clearly an essential component of the transportation system. In crowded areas such as cities we can see that there is a high demand (amount of cars that need a parking spot) and a low supply (parking space) which creates the need for regulation and economic value for parking space. This is where parking operators and local governments create revenue through the regulation and exploitation of (public) parking space.

The commercial parking business is known as a rather traditional and relatively “young” commercial business and this is supported by the fact that there is only a very limited amount of academic literature on the commercial parking business available. Due to the fact that the commercial parking business is relatively young and traditional the current players are potentially vulnerable to the entry of the “parking transaction broker”. Currently the still relatively small transaction brokers such as Yellowbrick and Park-line are quickly gaining market share in the Dutch parking market as intermediaries through the use of websites and smartphone applications. Due to the enormous increase of e-commerce, and even more specific the upcoming of the online transaction broker, it is very important for the current stakeholders in the parking market to determine their strategy with respect to these new players in the parking market.

## 1.2 Aim of the Report

The aim of this report is to investigate what future roles an online transaction broker, in this paper referred to as a parking broker, might fulfil in the Dutch parking market. The research question of this paper therefore states:

**What is the possible future role of the parking transaction broker?**

## 1.3 Methodology and Structure of the Report

The research question will be answered by using a SWOT analysis and an expert panel where several important stakeholders in the Dutch parking market will be asked how they see the future with respect to the role of the parking transaction broker in the Dutch parking market.

Prior to answering the research question it is important for the reader of this report to get an overview of the current (Dutch) parking market and to get a better understanding of the online (parking) transaction broker. This is achieved by performing desk research where existing literature on these subjects is collected and examined. In chapter two the important stakeholders and current trends in the Dutch parking market are described in order for the reader to get a better understanding of the current Dutch parking market. In chapter three the reader is informed about E-commerce and the “hotel broker” Booking.com is described for a better understanding of how an online transaction broker operates in a different market. Finally, at the end of chapter three, the parking transaction broker is described and the current parking transaction brokers are depicted.

In addition to the desk research also field research is performed by using an expert panel. Personal interviews were conducted with some important stakeholders in the Dutch parking market in order to gain first-hand knowledge about the current parking market and the parking transaction broker. The stakeholders that were interviewed include a parking consultant (whom can be considered a parking expert), two parking operators and a parking transaction broker. The results of these personal interviews are described in chapter four. In chapter five the (different) views from the interviewees about the parking transaction broker are brought together in a SWOT analysis. By using the SWOT analysis the reader gets a better understanding of the current parking brokers in terms of their weaknesses and strengths and the possible future role(s) of the current parking brokers in terms of opportunities and threats.

## 2. Parking

### 2.1 Types of Parking

In the Netherlands there are 3 different types of public parking facilities according to the study of van Dijken (2002):

- On and next to the road (on-street)
- Surface parking (either paved or unpaved, a form of off-street parking)
- Parking garages (off-street parking)

When looking at the study “Parkeren in Nederland” written by Spark Parkeren (2014) we see that there are about 8 million on street parking facilities and about 2 million off-street parking facilities in the Netherlands. These parking facilities are either free, regulated by the local government or exploited by commercial parking operators. Most public parking facilities are currently free and accessible for all parking consumers, however they are increasingly being regulated by local governments and commercial parking operators in the form of priced parking. Currently the average hourly-tariff in the Netherlands for off-street parking is 2.73 euro’s and for on-street parking it is 2.64 euro’s (Nationale Parkeertest, 2014).

About 1.3 million of the 10 million publicly available parking spots are currently being regulated by either commercial parking operators or local governments in the Netherlands (Spark Parkeren, 2014). From these 1.3 million regulated parking spots about 120.000 are so-called off-street parking spots and which are therefore situated in parking garages.

### 2.2 Stakeholders

When taking a closer look at the parking business it becomes clear that there are several stakeholders:

- Local Governments
- Parking Consumers
- Parking Industry

Each stakeholder will be discussed separately.

## 2.2.1 Local Governments

In the Netherlands public parking policy is a task of the local governments. The main purpose of parking policy for local governments is to improve the accessibility and the quality of life in crowded urban areas in the Netherlands. By using parking policy local governments are able to regulate the relatively scarce supply of parking space in crowded urban areas and therefore reduce parking inconveniences (Vereniging van Nederlandse Gemeenten (VNG), 2014). There are multiple forms of parking regulation which are applicable in the Netherlands, several are stated on the website of “Vereniging van Nederlandse Gemeenten (VNG, 2014):

### Priced parking

There are three main ways in which most local governments in the Netherlands create revenue through the use of priced parking regulation. These are:

- **Parking permits:** local residents can apply for a parking permit at their local government which enables them to park for a reduced fee in their neighborhood. Usually these permits are paid for yearly or monthly.
- **Parking tickets:** parking consumers purchase parking tickets which allow them to park at a specific parking facility for (usually) a given fee per hour of parking.
- **Parking fines:** When parking consumers do not have a (valid) parking ticket or parking permit they can get fined.

### “Blue Parking Zones”

In blue parking zones parking consumers are only allowed to park for a limited amount of time when they use a blue card created for this purpose on which they depict exactly at what time they arrived at the specific parking spot. The blue parking zone is free but parking consumers can be fined when they exceed the maximum amount of parking time which is usually for about 2 hours in the Netherlands.

### Park and Ride parking facilities

Park and Ride facilities are created outside of crowded urban areas to reduce congestion in these specific areas such as large cities. Parking consumers are allowed to park here for free or for a largely reduced tariff. The Park and Ride parking facilities are connected to public transportation which makes it easy for parking consumers to travel further into the city. However there are studies which question the effectiveness of Park and Ride facilities and concentrate on the negative effects of these facilities. The study by Mingardo (2013) describes these negative effects as following: people who used to cycle

now go by car to these Park and Ride facilities and people who used to use public transportation all the way to their destination now use the Park and Ride facilities to travel a part by their car, before continuing to their final destination by using public transportation. Mingardo (2013) therefore suggests that these Park and Ride facilities should have parking fees to reduce these unintended negative effects.

#### Disabled parking permits and parking facilities

Disabled parking permits are permits which are distributed by local governments for people with a serious (walking) disability. To receive this kind of permit the applicant must undergo a special medical test. Specially assigned parking spots are reserved for people with this kind of permit (Shoup, 2011).

#### The allocation of parking standards for residential areas, companies, offices and other places that attract parking consumers.

Property development in the Netherlands is bound to a certain “parking standard”. This is a minimum or maximum amount of parking space that is required to be constructed when new property is built. The amount of parking space that needs to be constructed depends on the type of property that is constructed. Academic literature states that this is a very inefficient and therefore costly method. Van der Krabben (2013) describes this and therefore supports “unbundled parking” where the supply of parking space is no longer linked to areal and property development.

The past decade the revenue from priced parking has become a very important tool for local governments to implement parking regulation in the form of priced parking. Local governments used priced parking regulation in the first place as a management tool for parking. In this way they tried to improve the accessibility and the quality of life of crowded urban areas such as cities. By implementing priced parking regulation the scarce supply of parking is priced. Parking consumers are no longer able to park their car for an unlimited time period and in this way the local government creates space for other parking consumers. The price of parking depends on the time that a car is parked, the amount of space that is used for parking and the location of where the car is parked. However there are also problems that arise with the implementation of priced parking regulation. For example: parking consumers park their cars at the sides of regulated parking areas where they create inconveniences for the local residents (Ison et al, 2006).

The revenue from priced parking can be used for any allocation by the local governments and accounts for about 10% of all corporate tax revenue of local governments (Tertoolen, 2014). In addition to this public parking revenue in the Netherlands is increasing every year with an estimated revenue of 660



million euros in 2014 (CBS, 2014b). It is very interesting to see that parking permits for local residents are relatively underpriced compared to the hourly parking tariff paid per hour by other parking consumers. While the price for parking in on-street and off street parking facilities account for almost 3 euros per hour, the fee for a parking permit in the Netherlands varies between 15,80 euros to 259,44 euros per year and thus for 8760 hours parking. (Van Best, 2012). A most probable explanation for this can be the fact that residents are the ones that vote in the local districts, and are therefore subsidized by the local governments. A study in 2012 written by Jos van Ommeren from the Vrije Universiteit van Amsterdam describes that many residents are willing to pay much more for their parking permits (Van Ommeren, 2012). Increasing the price of parking permits can therefore create an enormous amount of extra revenue for local governments.

The Dutch statistical office (Centraal Bureau voor de Statistiek or CBS) states that in 2014 155 local governments in the Netherlands have regulated parking in the form of priced parking and this is still increasing (CBS, 2014b). Most local governments which regulate parking in this specific form are relatively large with respect to their amount of inhabitants. We see that local governments exceeding 250,000 inhabitants have mostly implemented parking regulation in the form of priced parking (CBS, 2014b). An important note is that the revenue from priced parking does not cover the costs for creating these parking facilities. According to the report "Trends in parkeren" written by ANWB and Kenniscentrum voor Verkeer, Vervoer en Infrastructuur about 136 local governments show a loss on the balance sheet for public parking facilities (ANWB & CROW, 2014).

Local governments can decide whether they outsource the management and/or exploitation of (priced) parking facilities to private (commercial) parties. By exploiting a parking facility the exploiter bears the full risk in terms of costs and revenue of all strategic, tactical and operational decisions made. When outsourcing the parking management the operator of the parking facility outsources mainly the operational part of the parking facility. The parking manager bears no financial risk and gets a management fee in the form of management costs and sometimes a percentage of the profit. When local governments decide to outsource the regulation of priced parking in the form of either exploitation or management they do this through public tendering. Multiple commercial parties make an offering and the local government, quite often with the help of a parking consultant, decides which one offers the best price-quality ratio.

### **2.2.2 Parking Consumers**

According to the Dutch statistical office (CBS) an average person in the Netherlands makes about 2.5 movements per day during which they travel 32 kilometers (CBS, 2014a). As was stated before the

average car is parked for about 95% of the time (Shoup, 2005). Next to this Groenendijk (2010) states that an average car in the Netherlands is parked for approximately 23 hours per day. This means that an average car of a parking consumer in the Netherlands is parked approximately 95.8 percent of the time and that the car is parked at different locations. Groenendijk (2010) also states that there were 7.6 million private cars and 0.9 million work-related cars in 2010, which will be growing with 0.6 to 3.5 million cars in the period from 2010 till 2030. This shows that there will be a growing need for additional parking space for parking consumers. According to the CBS the main reasons why people travel by car are the following (CBS, 2014a):

- Commuting
- Business related visits
- Shopping
- Social and Recreational purposes

The choice of most individuals to go to their destination by car and not by public transportation, bike or on foot could be explained as following; individuals have autonomy, privacy and more comfort in their cars (Beirão and Sarfield Cabral, 2007). When looking at the preferences of parking consumers it becomes clear that the main motives to park at a specific location in a parking facility are the location of the parking facility and the awareness of the existence of the parking facility (Spark parkeren, 2014). Another important motive for a parking consumer is the accessibility of a parking facility (P1 parking, 2006).

An interesting observation is that the price of parking does not play a dominant negative role in the choice of parking consumers for parking their car. A study in 2012 by Giuliano Mingardo from the Erasmus University Rotterdam even shows that there exists a positive relationship between the price of parking and the turnover of (non-regional) shopping areas (Mingardo et al, 2012). The brochure "Parkeerregulering: toepassing en effecten" from Kenniscentrum voor Verkeer, Vervoer en Infrastructuur(CROW) shows that the price of parking has very little influence on the number of recreational visitors (CROW, 2003). When looking at the number of parking tickets sold for on-street parking facilities it becomes clear that an important driver for parking consumers to purchase parking tickets is when the chance to get fined for not paying is relatively large (Kleiman, 1993).

The past decade service in the parking industry has become increasingly important for parking consumers, especially in the form of online parking service. ICT has thus become a very important tool to satisfy parking consumer needs in the form of service. When concentrating on the offered online

services by commercial parking operators such as the possibility to reserve parking spots online, the online selling of parking tickets, and the upcoming of the online parking transaction broker this shift becomes clear. ICT also has a negative effect on the amount of parking consumers which can be explained by the fact that former parking consumers now shop online, directly from their homes, instead of driving to shopping areas.

### 2.2.3 Parking Industry

As was stated before about 1.3 million parking spots are regulated in the Netherlands. It is not exactly clear how many of these parking spots are operated by commercial parking operators but it is clear that the local governments are by far the largest exploiters of parking space for off-street and on-street parking facilities in the Netherlands. Next to the local governments there are several different players in the Dutch parking industry such as commercial parking operators, parking transaction brokers, parking consultants and parking management system suppliers.

#### Commercial parking operators

According to the report “Parkeren in Nederland” written by Spark Parkeren the five most active commercial parking operators in the Dutch parking market are (Spark Parkeren, 2014):

- P1 Parking
- Q-park
- Interparking
- Apcoa
- PCH

These commercial parking operators either own, exploit or manage parking facilities in the form of on-street and off-street parking facilities. Next to these five relatively larger parking operators there are many more smaller and locally active parking operators in the Dutch parking market such as G4S and Cition which are relatively large players in terms of parking management. This makes it hard to give the exact relative market share of all commercial parking operators that are active in the Dutch parking market.

#### Parking management system suppliers

Parking operators currently need parking management systems in order for them to be able to properly exploit and manage parking space. Parking management systems can be seen as access and revenue control systems that enable priced parking regulation for both off-street and on-street parking facilities. These systems include automated payment systems, barrier systems, parking columns and

software which enables monitoring the data and responding to the data to improve the efficiency of parking facilities. There are several suppliers of parking management systems in the Netherlands. A few examples are Skidata, WPS and IP parking.

#### Parking consultants

Parking consultants give advice and support all sorts of stakeholders that are somehow involved with parking. These stakeholders include: Local governments, parking exploiters, universities, airports, hospitals and many more. The local governments usually decide through the help of a parking consultant to which party they should outsource the exploitation or management of a parking facility. An example of a dominant parking consultant operating in the Netherlands is Spark-parkeren.

#### Parking transaction brokers

According to Hofs (2013) there are several intermediaries active in the Dutch parking market which can be seen as parking transaction brokers:

- ANWB
- Park-line / Parkmobile (part of Parkmobile Group)
- Yellowbrick
- App-Parking (part of SMSparkeren)

These parking transaction brokers operate through the use of websites, smartphone applications and text-parking (sms-parkeren).

## **2.3 Trends in the Dutch Parking Market**

The parking market in the Netherlands is currently subject to major changes and is therefore moving quickly. Some of the most important trends in the Dutch parking market are described in the report “Trends in parkeren” written by the ANWB and CROW (ANWB & CROW, 2014). These are described below.

#### The upcoming of Priced Parking regulation

Experts expect most local governments in the Netherlands with more than 100.000 residents to implement priced parking regulation in the near future. In the long term it is expected that priced parking might even be implemented for the entire Netherlands.

### Placemaking and willingness to pay

The trend in the parking market known as “placemaking” describes the effect that parking consumers often prefer to pay more for locations that are worth visiting. As was described earlier the price of parking does not really influence parking behavior of parking consumers. Placemaking even describes that the price of parking attracts parking consumers to certain locations. The past decade complex information about the actual costs and benefits of parking facilities have become more transparent for parking consumers, this increased the understanding of parking consumers of why parking is priced and therefore raised their willingness to pay for parking.

### Flexible parking tariffs

New technological developments in the parking market make it possible to implement flexible parking tariffs. 86 % of correspondents to the report “Trends in parkeren” by the ANWB and CROW state that they prefer paying per minute of parking instead of the traditional way of paying per hour of parking ( ANWB & CROW, 2014). Parking brokers and parking managers such as Parkmobile, Park-line and Cition are already offering this service. Another possibility is the flexibility of parking tariffs during different time periods of the day during which the demand for parking space is different. Busier time periods are priced higher than other more quiet time periods during the day. This is not implemented in the Dutch parking market yet but in countries like the United States of America this has already proven to be a success.

### Paying by (credit)card

The past years more and more parking meters were equipped with software and hardware that enabled parking consumers to pay by card. Paying by card is now becoming the new payment standard for priced parking. Some parking facilities don't even offer the possibility to pay by cash anymore.

### License plate parking

An interesting trend in the Netherland is the upcoming of license plate parking (Kenteken parkeren). Local governments are implementing this on a large scale in cities in the Netherlands such as Rotterdam and Amsterdam. Parking tickets are no longer necessary as parking consumers register their license plate in the system of parking meters.

### Mobile Parking

An even more recent trend and a serious threat to the entire existence of parking meters is the upcoming of Mobile parking. By using mobile phones parking consumers are no longer dependent on parking meters when paying for priced parking. The parking consumer is now able to start and stop parking by using smartphone applications, calling and texting. About 68% of the experts that were

interviewed in the report “Trends in Parkeren” by CROW and the ANWB think that mobile parking will be the main payment method in the Netherlands within 5 years (ANWB & CROW, 2014). Yellowbrick, a parking transaction broker and supplier of mobile parking, describes the following benefits of mobile parking for parking consumers on their website (Yellowbrick, 2014a):

- Parking consumers are no longer dependent on parking meters
- No more parking fines
- Start and stop parking by using your mobile phone

Another important benefit of mobile parking is the possibility to pay for the actual time that a parking consumer has parked. This is achieved by implementing options such as paying per minute of parking or by paying with the smallest monetary unit for additional minutes of parking which is automatically calculated by the provider of the parking service (Parkmobile, 2014).

#### Online parking services

The past decade online parking services have become more and more important in the parking business. By using smartphone applications (form of mobile parking) and websites parking operators and parking transaction brokers such as Yellowbrick are responding to this trend. Examples of services being offered by parking operators are the online reservation of parking spots and the sale of parking tickets online. It is clear that the upcoming of the ICT sector is currently having a significant effect on the parking business.

## **2.4 Conclusion**

In this chapter the reader gets a better understanding of the (Dutch) parking market. It becomes clear that there are three main types of parking facilities: on-street parking facilities, surface parking facilities and off-street parking facilities. Of the 10 million publicly available parking spots in the Netherlands about 1.3 million are regulated by either local governments or parking operators. The main stakeholders in the parking market are the local governments, commercial parking operators, parking management system suppliers, parking consultants and the parking transaction brokers.

The local governments are the largest exploiters of on-street parking facilities and their revenue from priced parking regulation accounted for about 660 million euros in 2014 alone, which is about 10 % of all corporate tax income. In the year 2014 there are 155 local governments in the Netherlands that have regulated parking in the form of priced parking. However, the revenue from priced parking does not cover the cost of creating parking space for local governments. There are multiple ways in which

local governments regulate parking space such as priced parking, blue parking zones, park and ride facilities, disabled parking permits and the allocation of parking standards. Local governments can decide to outsource the management and/or exploitation of (priced) parking facilities to private parties, they usually do this through public tendering with the help of a parking consultant.

On average parking consumers in the Netherlands park their cars for about 95 % of the time and make about 2.5 movements per day. The main reasons why parking consumers travel are: commuting, business related visits, social/recreational purposes and shopping. It becomes clear that the location, accessibility and the awareness of the existence of the parking facility are the main motives for parking consumers to park at a certain parking facility. An important observation is that the price of parking does not play a dominant negative role in the choice of parking consumers for parking their car at a certain parking facility.

Currently the Dutch parking market is subject to major changes and is therefore moving quickly. Some of the most important trends over the past few years in the parking market, which are described in this chapter, are the upcoming of priced parking regulation, placemaking and willingness to pay for parking, flexible parking tariffs, paying by (credit)card, license plate & mobile parking and the upcoming of online parking services.

## 3. E-commerce & the Online Transaction Broker

### 3.1 Types of E-commerce and E-commerce business models

As was stated in the introduction Electronic-commerce, better known as E-commerce, has been growing exponentially the past decade with the enormous growth of the amount of internet users worldwide. The existence of E-commerce dates back to the year 1991 when the internet was made available for the first time for commercial purposes (Mohapatra, 2013). The Dutch statistical office (CBS) defines E-commerce as the placing and receiving of orders for goods and services through the use of electronic networks, regardless of how these goods are paid for or delivered. Orders by telephone, fax and email are not a part of E-commerce (CBS, 2014c).

There are five main types of E-commerce (Dontigney, 2014):

#### Business to Business

In the form Business to Business, also known as B2B, companies exchange goods and services without the involvement of any other parties such as retail consumers. An example in the Netherlands would be the wholesaler Sligro. Only companies which are registered at the Dutch Chamber of Commerce are allowed to shop here.

#### Business to Consumer

The type Business to Consumer, also known as B2C, is the most well-known type of e-commerce. This form of e-commerce consists out of the online transactions between consumers and online retailers or service providers. A well-known example in the Netherlands is the website Bol.com.

#### Consumer to Business

Consumer to Business, also known as C2B, can be explained as consumers whom use an online platform to find professionals to accomplish a task. The consumer could post a job description on an online platform and companies get the chance to bid. The consumer then decides which company is most conform with the job description and decides whether or not he accepts the bid. In the Netherlands Marktplaats.nl is one of the websites that offers this type of E-commerce.

#### Consumer to Consumer

The form consumer to consumer, also known as C2C or Peer to Peer, enhances the transactions between and amongst consumers through the use of an online platform. Consumers are no longer



reliable on corporations, by using the internet earlier purchased and used products can be sold worldwide from consumer to consumers fairly easily. Examples of platforms in the Netherlands that support this feature are the websites Ebay.nl and Markplaats.nl.

#### Mobile E-commerce

The form Mobile E-Commerce, also known as M-commerce, is a relatively new concept of E-commerce which came into existence with the upcoming of smartphones that support applications which are web-enabled. Increasing numbers of companies are now not only selling their products by using websites but also through the use of smartphone applications that are also web-enabled. M-commerce is applicable to all the different types of E-commerce.

#### **Business Models E-commerce**

The main purpose of most traditional businesses is to generate revenue and foremost profit. This is no different for internet based companies. In 2011 Grimes, Ren and Stevens found that the internet has improved productivity for almost all organizations that are using it (Grimes et al., 2011). Productivity must therefore somehow be translated into profitability. To achieve this different e-businesses position themselves in all different parts of the value chain. Traditional businesses either start selling their own products online or try to alter existing (traditional) links in the value chain. A major impact of the internet is that companies can now either “disintermediate” or “reintermediate”(Chaffey, 2007). Disintermediation is “The removal of intermediaries such as distributors and brokers that formerly linked a company to its customers” (Chaffey, 2007, p. 45). Reintermediation is “The creation of new intermediaries between customers and suppliers by providing services such as supplier search and product evaluation” (Chaffey, 2007, p.46). By using disintermediation a company uses the opportunity of the internet to cut sales and infrastructure costs. Somewhat more significant is the term reintermediation. This is where new e-businesses such as online transaction brokers enter the market and add value by making these markets more efficient through bringing together demand and supply. According to Chaffey (2007), traditional companies can also “Countermediate”. By creating their own online intermediate they can counter or take advantage of reintermediation. The study “Evaluate E-business Models” written in 2007 by Peter Wang describes several business models of e-businesses (Wang, 2007):

#### Brokerage model

An e-business broker brings together supply and demand on online platforms. To create revenue an e-business broker charges a commission or fee on every transaction it is involved in. The brokerage

model plays an important role in Business to Business (B2B), Business to Consumer (B2C) and Consumer to Consumer (C2C) markets. Examples of e-business transaction brokers are the websites Booking.com, Ebay.nl and Marktplaats.nl.

#### Merchant model

This model transfers the traditional retail model into an e-commerce model by using an online platform. There are traditional companies that are now selling their goods and services not solely from their shops but also over the web. By doing this they eliminate the middleman which could take position as a broker. New E-businesses, which did not operate before in the traditional retail market, such as bol.com also utilize the services and technologies offered by the web to sell their services and products directly to consumers.

#### Advertising model

E-business advertising models are an extension of existing traditional advertising media such as the television, newspaper and the radio. Large search engines on the web such as Google and Bing have enough visitors each day to charge advertisers to place advertisements on their websites. These e-businesses create revenue in many different ways. This can be done through monthly payments but also by using different methods such as charging a fee per click of a visitor on the advertisement.

#### Info-mediary model

In today's world information is becoming more and more important. Data about consumers and their consumption behavior is collected by e-businesses that use this model. Information about producers and their products can also be interesting for consumers. Information about consumers and producers is collected in multiple ways. For example, by using the internet, some info-mediaries offer free assistance to sellers and buyers to understand specific markets. By analyzing what decisions consumers and producers make they gain information. These info-mediaries will then sell this information to specific companies that will use this information for marketing purposes.

#### Subscription model

An E-business that uses this model sells its digital products and services to consumers on a subscription basis. There are many different products and services for which this model is used. Examples in the Netherlands are the newspaper "Volkskrant" and the monthly subscription fee for the online music streaming service Spotify.com.

### 3.2 Booking.com a Hotel Business Transaction Broker

The online travel agency Booking.com, which is part of the Priceline Group, was founded in 1996 and is now available in more than 40 different languages and offers over 550,000 accommodation possibilities in 208 countries making it the world leader in booking accommodation online(Booking.com, 2014). Booking.com operates as an online travel agency (OTA) and is active in the Business to Consumer (B2C), Business to Business (B2B) and M-commerce types of E-commerce markets. Unlike other online travel agencies such as Expedia.com and Agoda.com that use merchant E-business models Booking.com uses an agency model which can be seen as a brokerage E-business model since it charges a commission for every room sold through the use of their (online) services. The creation of the intermediary Booking.com can be seen as a form of reintermediation since it provides an online marketplace that offers a wide reach of relevant information online, makes comparisons between different hotels and enables consumers to confirm and pay for their reservations online without having to go to any physical storefront. The vision of the online travel agency Booking.com is described on their website as: “Booking.com is an informative, user-friendly website that guarantees the best available prices. Our goal is to provide business and leisure travelers with the most accessible and cost-effective way of discovering and booking the broadest selection of accommodation, in every corner of the world” (Booking.com, 2014).

Recent history shows that Booking.com has been growing with an astounding rate and without any brand recognition Booking.com has grown into the ideal online marketplace for hotels to promote and sell rooms to consumers all over the world. Some of the advantages for consumers are described on the website of Booking.com (Booking.com, 2014a):

- Best available rates
- No reservation fees
- Secure booking
- Wide selections of hotels all over the world
- Book hotels at home or at any location with the use of the Booking.com smartphone application
- User ratings for hotels
- 24/7 Multilingual assistance

According to Booking.com not only consumers benefit but also the suppliers of hotel rooms benefit from the services Booking.com offers (Booking.com, 2014b):

- Large Global Audience which results in increased numbers of hotel room reservations
- Free registration
- 24/7 Multilingual assistance

J.D. Power states on its website that Booking.com has the highest customer satisfactory rate of independent travel websites mainly due to the competitiveness of pricing (J.D. Power, 2012). From this it must become clear that the relationship between hotels and Booking.com is quite controversial. At one side hotels enjoy the increased numbers of room reservations through the services that Booking.com offers, but at the other side they have to pay high commissions and offer discounted rooms. Some hotels might even be extremely reliant of online travel agencies such as Booking.com and if these online travel agencies would raise their commission fees there is little that these hotels can do about it (Lee et al., 2012). As was stated in the introduction it was calculated that the leakage from the hotel industry accounted for about 5.4 billion dollars in the year 2010 alone (Starkov,2010). George Panayotis, President and CEO of the MKG group, describes some of the other developments of Booking.com that are considered to be harmful for hotels. Currently Booking.com does not only use its flat commission model but also gives priority in the search results of consumers to hotels that pay higher commissions and Booking.com has changed its information policy and now blocks the access of hotels to the customers information, for example by not giving the email addresses of consumers to hotels to prevent the hotels to contact the consumers directly (Panayotis, 2012).

It becomes clear that even though hotels get more reservations by using the services offered by online travel agencies such as Booking.com, the bargaining power of hotels is small due to the large market power of these online travel agencies. However due to the upcoming of many online travel agencies and the enormous increase of users of these online services many hotels have grown to become reliant of websites such as Booking.com. With consumers benefiting from the services offered by online transaction brokers in the form of online transaction agencies such as Booking.com, the relationship between online travel agencies and hotels remains controversial (Lee et al., 2012).

It must become clear for hotels how they can use online travel agencies such as Booking.com in their advantage. This could for instance be done by making sure that these hotels don't overly depend on these online travel agencies. By having multiple digital channels and therefore by diversifying their digital marketing strategies, hotels might be able to use online travel agencies in their advantage (Toh et al., 2011). The main interests of hotels should be their online presence which could involve:

- Their own professional website
- Multiple channels for online reservations, different online travel agencies such as Booking.com, Expedia.com and Agoda.com
- Creating a smartphone application on a relatively large scale (for instance by joining a hotel group)
- Be active on social media such as Facebook and Twitter.
- Online presence at cultural and social events, for example by advertising their accessibility and presence at these websites
- Collecting data from guests to target them more directly and create loyalty programs in order to create customer loyalty

### 3.3 The Parking Transaction Broker

As was mentioned in the introduction the parking business in the Netherlands is a very traditional business. The past years the government has tried to improve the transparency in this market by trying to stimulate local governments and parking operators to make data about parking in the Netherlands publicly available and to join organizations that constitute this such as Servicehuis Parkeer- en Verblijfsrechten and the Nationaal Parkeer Register(NPR) in combination with the Rijksdienst wegverkeer (RDW) (NPR, 2014). This data can be used for innovation in the existing parking market and by that the creation and improvement of (new) parking services (NPR, 2014). This is where the parking broker comes in. By making static and dynamic information about parking space available to parking consumers and by offering services that use this data to improve parking service for parking consumers they create a new business in the parking market; the parking transaction broker.

A parking transaction broker is active in the Business to Business(B2B), Business to Consumer (B2C) and M-commerce types of E-commerce markets where it operates as an intermediary while using the brokerage business model, the subscription business model or a combination of both business models. The parking transaction broker is a newly created intermediary and can therefore be seen as a form of reintermediation in the parking market. A parking transaction broker knows the ins and outs of where to park in cities. The role of the parking broker is to place paying parking consumers in on-street and off-street parking facilities of parking operators and local governments. In this way the parking broker brings together supply and demand for parking space and therefore supposedly helps out both consumers and suppliers of parking in the parking market. A parking transaction broker satisfies consumer needs in the form of service and therefore contributes to the user friendliness of parking facilities for parking consumers. For example by enabling parking consumers to park by using their

smartphones and the internet parking brokers make the whole parking experience more pleasant for the parking consumer.

The current parking brokers in the parking market are now mainly active as payment service providers but are becoming increasingly involved in traditional broker practices such as advising, informing and by that actively mobilizing parking consumers to park at parking facilities of connected local governments and parking operators. The payment services these parking brokers currently offer are in the form of mobile and online parking services. By using the internet, cellphones and smartphone applications parking consumers are currently able to start and stop parking at any parking facility where these parking brokers operate.

As was mentioned earlier, the most active parking brokers in the Netherlands are:

- Yellowbrick, available in 126 cities in the Netherlands
- Parkmobile, available in more than 130 cities in the Netherlands and Belgium
- Park-line, available in more than 120 cities in the Netherlands
- ANWB, available in 126 cities in the Netherlands
- App parkeren, available in more than 100 cities

Some of the advantages for parking consumers due to the current services offered by parking brokers in the Netherlands are stated on their websites (Yellowbrick, 2014; Park-line, 2014; Parkmobile 2014; App-parking, 2014):

- Reduce the risk of getting parking fines
- Able to park at many different locations nationwide with the same payment service
- No more parking meter and cash payments for parking
- Pay with the smallest monetary unit or per minute of parking
- Start and stop parking by using your smartphone, cellphone or the internet
- Receive the bill for parking at the end of the month and have a good overview of value added tax (VAT) paid
- Different payment methods: Subscription or pay per parking transaction
- Multiple license plates can be registered

### 3.4 Conclusion

In this chapter the reader gets a better understanding of e-commerce and the online transaction broker operating in both the hotel market and the parking market. The past decade electronic commerce, better known as e-commerce, has grown with an astounding rate due to the enormous growth of internet users worldwide. E-commerce is defined as the placing and receiving of orders for goods and services through the use of electronic networks, regardless of how these goods are paid for or delivered. Orders by telephone, fax and email are not part of E-commerce. The five main types of e-commerce are: Business to Business (B2B), Business to Consumer (B2C), Consumer to Business (C2B), Consumer to Consumer (C2C) and Mobile e-commerce (M-commerce).

A major impact of the internet is that businesses can now either “disintermediate”, “reintermediate” or “countermediate”. In order to generate revenue and profit, e-businesses position themselves in all different parts of the value chain. They do this by using several, or one, of the following business models: Brokerage model, Merchant model, Advertising model, Info-mediary model or the subscription model.

The internet based company Booking.com operates as an online travel agency(OTA) and is active in the Business to Consumer (B2C), Business to Business (B2B) and M-commerce types of e-commerce markets. Booking.com uses a brokerage e-business model and can be seen as a form of “reintermediation”. By charging a commission fee for every room sold through the use of their online services Booking.com operates as a hotel transaction broker. Some of the main advantages of the brokerage services booking.com offers for consumers are : best available rates, no reservation fees, secure booking, 24/7 multilingual assistance and wide selections of hotels all over the world.

Booking.com states that not only consumers benefit but also the suppliers of hotel rooms. However, the relationship between hotels and Booking.com remains controversial. With new developments such as priority listings in the search results and the changed information policy, the relationship between hotels and Booking.com is increasingly jeopardized. It becomes clear that hotels should concentrate on how they can use online travel agencies such as Booking.com in their advantage without becoming overly dependent on them.

The parking brokers in the Netherlands are currently mainly active as payment service providers but are becoming increasingly involved in traditional broker practices such as advising, informing and by that actively mobilizing parking consumers. The recent trend in the Dutch parking market that involves

making static and dynamic information about parking facilities publicly available stimulates this. A traditional parking transaction broker is active in the Business to Business(B2B), Business to Consumer(B2C) and M commerce types of e-commerce markets where it operates as an intermediary while using the brokerage business model, subscription model or a combination of both business models.

The role of the parking broker is to place paying parking consumers in on-street and off-street parking facilities of parking operators and local governments. This is achieved by satisfying consumer needs in terms of service and by that improving the user friendliness of parking facilities for parking consumers. The most active parking brokers in the Netherlands are: Yellowbrick, Park-line, Parkmobile, ANWB and App parkeren. Some of the advantages for parking consumers due to the services offered by these parking brokers are: Reducing the risk of getting parking fines, able to park at many different locations nationwide with the same payments service, no more parking meter and cash payments for parking, paying with the smallest monetary unit or per minute of parking and starting and stopping parking by using a smartphone, cellphone or the internet.



## 4. Expert Panel

### 4.1 Introduction

In addition to the desk research which was performed earlier in this paper also field research was done in the form of an expert panel. Personal interviews were conducted with some important stakeholders in the Dutch parking market in order to gain first-hand knowledge about the current parking market and the parking transaction broker. The stakeholders that were interviewed include a parking consultant (whom can be considered a parking expert), two parking operators and a parking transaction broker. The different views from the interviewees about the parking transaction broker are finally brought together in a SWOT analysis, this will help to describe the possible future role(s) of the parking transaction broker.

The questions that were asked can be found in the appendix. It must be noted that some of these questions were edited or left out during the interviews depending on which stakeholder was interviewed. In the next sections this paper will outline the most important findings from the personal interviews of the expert panel.

### 4.2 Parking in General

The parking operators and the parking broker do not expect a major change in the demand for parking in the short term. One of the explanations for this is that the elderly are becoming more vital and are therefore still using their cars to visit theatres, restaurants and other recreational facilities in cities. Another important reason according to one of the parking operators is that the total amount of cars in the Netherlands is still increasing.

The parking expert does not agree on the fact that the demand for parking is not changing in the short term. He states that in the period from 2008-2013 the total usage of parking spots in Dutch inner cities has been decreasing by 16% however it must be noted that this does not count for the five largest cities in the Netherlands. According to the parking expert some of these cities are now also dealing with a different kind of parking problem; the bike.

An interesting note by one of the parking operators is that he thinks that there are more than enough parking facilities available in the Netherlands, also in the larger cities such as Amsterdam. A lot of these parking facilities are empty and the parking operator therefore thinks that it will be effective to drastically reduce the price of parking in these facilities in order to fill them up. Also by making parking

facilities of businesses publicly available after work hours and during weekends will make a lot of extra public parking space available in crowded urban areas and will result in extra revenue for these facilities.

The upcoming of internet shopping does have a negative effect on the demand for parking for the weaker shopping centers according to parking operators. The parking broker explains that this is due to the fact that the internet cuts parking and fuel costs and saves time. Parking operators state that this counts mostly for the shopping centers where customer experience is of a lower value. Parking operators therefore state that customer experience is a very important driver for potential customers to visit a shop and shops should therefore increase their focus on this. Interesting to see here is that also the parking expert and parking broker agree on this. They argue that shops should compensate customers for their parking and fuel costs. For example in the form of promotion such as couponing in order to improve customer experience; “It must be more fun and lucrative to come to a shop than to buy on the internet”.

### 4.3 Parking Consumers

When looking at the main reasons for parking consumers to park their car at a specific parking facility parking operators give the following list of reasons in this specific order:

- 1) Location
- 2) User friendliness (Accessibility of a parking facility, Payment services and other services that support parking consumers by reducing the downsides of parking)
- 3) Safety (the parking consumer’s sense of safety) and maintenance of parking facility
- 4) Price of parking facilities

All stakeholders that were interviewed agree that the location of a parking facility is currently the most important reason for parking consumers to park their cars at a specific parking facility. Parking consumers want to park as close to their final destination as possible, preferably in front of the door. However the parking expert thinks that the location of a parking facility is becoming less important. He states that the event which is taking place at a certain location will play a much larger role in the choice of parking consumers to park at a certain parking facility. The event will attract potential parking consumers and therefore parking should be actively marketed in combination with the event in the form of informing and advising parking consumers and promoting the parking facility in ways such as couponing and discounts for reserving parking spots. It is important for parking operators and parking brokers to start alliances with the organizers of events and the owners of facilities that attract parking

consumers such as shops, theatres, cinemas, restaurant and museums. An example would be the offering of a so called combination ticket: enjoy the event in combination with parking for a fixed price.

Parking operators think that the marketing of parking facilities is of a lower interest to parking consumers. Parking is only a secondary need, parking consumers park their cars to get to their final destinations and are not there to enjoy parking, and therefore the marketing of parking facilities will not be very effective. However all stakeholders do agree that informing and advising parking consumers about parking facilities will play a more important role in the future, especially to improve the user friendliness of parking. By bundling services around the entire customer journey of a parking consumer there are many possibilities to improve user friendliness. For example; informing parking consumers about construction works on route, the availability of parking spots in a certain parking facility and the possibility for parking consumers to reserve parking spots.

The impact of the possibility for parking consumers to reserve parking spots at parking facilities remains controversial among parking operators. The argument against the effectiveness of reserving parking spots is that the location of a parking facility is by far the most important reason for parking consumers to park their car. Parking facilities which are situated at the right locations will therefore always be fully occupied. Parking operators should not discount parking facilities in the form of reserved parking spots at these locations. The possibility to reserve parking spots will therefore mainly be effective for parking facilities which are not situated at popular locations and are as a result of this not fully occupied. All stakeholders do agree that the possibility to reserve parking spots is more effective for parking consumers that are looking for long term parking, this means that they are looking to park their car for more than a couple of hours.

The parking expert and the parking broker do think that the possibility for parking consumers to reserve parking spots will play a large role to improve user friendliness. The parking consumer is willing to pay to be ensured of a parking spot since not being able to find a parking spot is one of the main displeasures of parking.

#### **4.4 Trends in the Dutch Parking Market**

##### Mobile parking

Mobile parking will play a very important role in the near future according to all stakeholders. The parking expert states that in the Dutch city of Rotterdam alone already about 50% of parking revenue is earned through mobile payment systems and that this accounts for about 40% of all payments made

by parking consumers. According to the parking expert an increasing amount of people own a smartphone which supports a mobile payment system in the form of a smartphone application which is offered by one of the current parking brokers. Mobile parking in combination with license plate parking will therefore become the payment standards in the near future. The parking broker states that parking consumers are becoming increasingly interested in having a mobile wallet. This means that the smartphone will play an increasingly important role as an access, information, ticketing and promotion system for parking facilities in the near future.

#### Car manufacturers

Parking operators agree that car manufacturers will play a much more important role in the long term. In the long term cars will be able to navigate by themselves and this will completely change the parking market as we know it. Cars will now be able to navigate to parking facilities outside the areas where priced parking is implemented and are therefore making the current parking operators insignificant. Another possibility is that cars will not even have to park anymore and will just drive around until the car is needed again. However the problem that arises here is that there is simply not enough asphalt for these cars to drive on. It must be noted that the opinions about the amount of time it will take until such a car enters the market are quite divided but it will take at least 15 years before anything like this is likely to happen. Therefore the car will at least remain driver assisted for the upcoming 15 years, which means that parking consumers still want to park at the right locations for the upcoming 15 years.

According to one of the parking operators cars will not only be able to navigate without being assisted by a driver, they will also have built in infrastructure which enables it to act as a fully functional payment system. In the future the car will be connected to a large network through which it is enabled to automatically pay for services such as parking but also for other things such as fuel and toll roads. The car will have its own IP address which enables this. Current trends such as mobile parking and license plate parking are the first steps towards this direction according to parking operators.

#### Priced parking regulation

When looking at priced parking regulation, parking operators expect that most areas will remain regulated on the same level. Hence, there will not be many new local governments that implement or abolish priced parking regulation in their districts. However existing areas with priced parking regulation will be extended. For example, in cities to prevent consumers from creating inconveniences by parking just outside of areas where priced parking regulation is implemented.

### Static and Dynamic information of parking facilities

A very important trend in the Dutch parking market is that the government is trying to make dynamic and static information of all parking facilities in the Netherlands publicly available. All stakeholders agree that this will give an enormous boost to innovation in the Dutch parking market. Parking in the Netherlands will now become more transparent and companies will use this to improve or create services that improve the user friendliness of parking consumers. It will now be possible to accurately inform and advise parking consumers by using services that operate on a national scale and therefore contain a large amount of parking facilities. The result of nationally operating (payment) services for parking is that the difference between on-street and off-street parking will dissolve, it will not matter anymore where parking consumers park their cars.

The problem that arises here is that much of the information about parking facilities is private and in the hands of parking operators. Parking operators state that they are willing to supply this dynamic and static information of their parking facilities but only under the condition that all the information they supply is used for objective purposes only. It must not be possible for other stakeholders in the parking business to misuse this information in any way which could potentially harm the parking operators.

## **4.5 The Parking Transaction Broker**

The parking expert and parking operators state that today's parking brokers in the Dutch parking market are mainly active as payment service providers but are becoming increasingly involved in traditional broker practices such as advising and informing parking consumers. In this way parking brokers are actively mobilizing parking consumers to park at specific parking facilities of connected local governments and parking operators. All stakeholders that were interviewed, including the parking broker, agree that the current and future parking broker will mainly serve the parking consumer in terms of parking service and by that improving the user friendliness of parking.

When taking a closer look at parking service and therefore the user friendliness of parking, all stakeholders agree that this means that parking consumers are able to park their cars with a minimum amount of downsides in the entire parking process. On the contrary of the parking broker and the parking expert, the parking operators think that advising parking consumers and the marketing of certain parking facilities to parking consumers is not very effective. They argue that parking is just mobility and therefore only a secondary need which is of much lesser importance for parking consumers. According to parking operators parking services which are offered by parking brokers

should mainly involve the informing of parking consumers in an objective manner in combination with the offering of user friendly payment services. The parking operators think that parking consumers are just not interested in the rest, a parking consumer just wants to drive in and out of a parking facility without any problems or inconveniences.

According to all stakeholders some examples of static and dynamic information about parking facilities that could be supplied by parking brokers to parking consumers in order to improve the user friendliness of parking are:

- Road works on route to parking facility
- Availability of parking spots and their exact location in a certain parking facility
- Exact location of parking facility and the easiest/fastest route to the parking facility
- Prices of parking facilities

As was stated before the possibility to reserve a parking spot could also contribute to parking service for parking consumers but this remains controversial among parking operators. A problem the parking broker faces here is the fact that they do not own physical parking spots and as a result of this they are very reliant on the cooperation of local governments and parking operators as the suppliers of parking space.

When concentrating more on the exact role of the parking broker we see that the parking broker that was interviewed defines this as following: Parking consumers are looking for a parking facility and the parking broker guides and mobilizes them to certain parking facilities on the basis of information which is currently still very limited. In this way the parking broker brings together the supply of parking spots and the demand for parking spots while functioning as an intermediary. The broker adds to this that in this process the parking broker can supply all sorts of extra parking services such as payment services in order to improve the user friendliness of parking. The parking expert thinks that by actively advising parking consumers and by the marketing of parking facilities through the use of promotional activities such as couponing, a future parking broker can improve parking service for parking consumers.

According to one of the parking operators the future parking broker will most likely act as the payment interface between parking operators and parking consumers. The main amount of revenue which is earned by parking operators will come from parking brokers through the payment services they offer and not directly from parking consumers. However another parking operator argues that these

services are now mainly interesting for the heavy users of parking facilities, which is a relatively small group compared to all parking consumers in their entirety, and therefore this is less likely to happen.

What becomes clear from this is that the parking broker should increase its focus on two sides of the parking market according to the parking expert. In the first place they should intensify their business to consumer (B2C) focus by offering additional services such as informing and advising parking consumers about parking facilities in order to reach a larger public. In this way not only the heavy users of parking facilities profit but the services also become more interesting for the general public. Another problem of the current parking broker according to a parking operator is the fact that the parking broker charges a subscription fee which is too high for parking consumers that use the service only occasionally.

On the other hand the parking brokers should increase their focus on the business to business (B2B) side of the parking market in which they actively market parking facilities of parking operators and the final destinations of parking consumers. By approaching the retail sector they can discuss possible promotional activities such as to compensate retail customers for parking through couponing, combination tickets and in-store discounts. Also other recreational facilities and events such as museums, restaurants, festivals and theatres can have similar deals. The problem that arises here is that parking brokers need the cooperation of both local governments and parking operators. Agreements must be made that make sure that parking operators and local governments also benefit from this.

All stakeholders agree that it is very important for parking brokers to have a lot of parking facilities available throughout the entire Netherlands in which parking consumers can park their cars by using the services offered by the parking broker. Currently most parking facilities that parking brokers offer are on-street parking facilities. This means that parking brokers should actively approach parking operators of off-street parking facilities in order to make these facilities available for their users as well. The parking broker thinks that parking brokers and parking operators are complementary and should therefore cooperate. The parking broker thinks that by working together services can be created which will not only be beneficial for parking consumers but also for parking operators and parking brokers.

All stakeholders agree that the main advantages of the parking broker for the parking operator are the facts that they know their customers and are able to mobilize them. Another interesting note by a parking operator is the fact that cashless payment possibilities are becoming increasingly interesting

for parking operators. It is expensive for parking operators to collect and process cash payments and it also involves risk. The parking broker can make sure that the exploitation costs of parking facilities are reduced by implementing their (online) payment services. Depending on the brokerage fee which is charged by the parking broker this can be very interesting for parking operators.

According to the parking expert it is important for parking operators to quickly act on the emerging parking brokers because they have national coverage and therefore their services are available at many different parking facilities. Parking consumers are willing to use these services of nationally operating parking brokers and will look for connected parking facilities. The parking expert states that the current parking operators are too small to start their own brokerage services in terms of the amount of parking facilities in which they operate. A parking operator states that however this is true it could be possible that parking operators join strengths in order to exclude the emerging parking brokers. This will depend on the brokerage fee parking brokers will charge and their objectivity regarding the distribution of information to parking consumers, the marketing of parking facilities and advising parking consumers about parking facilities.

One of the parking operators states that once the parking broker has both on-street and off-street parking facilities connected to its services on a national scale and a large market penetration they will also be able to act as a sort of “market master”. The parking broker will now be able to assign certain groups of parking consumers to specific parking facilities. They could do this by informing and advising parking consumers but also through regulating the parking facilities. For example by offering parking facilities of businesses outside of work hours to the general public or by implementing flexible parking tariffs for different time periods of the day depending on the parking activity in the area of parking facility. Another even more advanced possibility is the offering of private parking facilities of residents to the general public.

As was mentioned earlier parking operators think that car manufacturers will play a much more important role in the future parking market. The parking operators state that it might happen that car manufacturers will implement their own parking services in the cars they manufacture and by doing this they will exclude the parking broker. The parking broker reacts to this that when something like this is likely to happen car manufacturers will probably want to use a parking service system which is already widely accepted by parking consumers and car manufacturers will therefore approach existing parking brokers.



## 5. SWOT Analysis for the Parking Transaction Broker

In the previous chapter the outcomes of the personal interviews which were conducted in the expert panel are described. In the upcoming sections these outcomes will be classified in a SWOT analysis together with the other material that was discussed earlier in this paper. In this way we get a better understanding of the current parking brokers in terms of their current weaknesses and strengths and the possible future roles of the current parking brokers in terms of opportunities and threats.

The foundation for the SWOT analysis was created in the late 1960s (Learned, 1965). A SWOT analysis is a planning method aimed at evaluating the (S)trengths, (W)eaknesses, (O)pportunities and (T)hreats involved in projects and organizations. According to Kotler and Keller (2012) the SWOT analysis is a way to monitor the internal and external marketing environment which can be both favorable or unfavorable.

The objective of the external analysis is to identify the most important Opportunities and Threats. The importance of the external SWOT analysis is to try and foresee future possible external developments which may have positive (Opportunities) or negative influences (Threats) on the project or organization.

The internal analysis of the marketing environment focuses on the main Strengths and Weaknesses of a project or organization. This is necessary to evaluate the strategic capacity of the project or organization in the present moment which can be translated to the capacity to adapt to changes with respect to external developments in the form of their opportunities and threats.

### Structure of a SWOT analysis

#### SWOT Analysis



## 5.1 Strengths of the current Parking Transaction Broker

In this section the main strengths of the current parking transaction brokers are described.

### Priced parking regulation is implemented in 155 local governments in the Netherlands

Many local governments have implemented priced parking regulation and therefore the services that parking brokers offer can be used here. Most parking brokers are already active in many of these areas.

### National coverage

Many parking facilities throughout the entire Netherlands are connected to the services of the current parking brokers. As a result of this parking consumers are able to park at many different parking facilities throughout the entire Netherlands by using the services offered by the current parking brokers.

### Consumer knowledge of the parking consumer

Already a large group of parking consumers is using the services offered by today's parking brokers. The parking broker knows important information about these parking consumers such as the areas where they park, how often they park and what they pay for parking. This information can be used to improve and create services for parking consumers and is interesting for parking operators and local governments.

### Able to mobilize parking consumers

Since a large group of parking consumers is using the services offered by today's parking brokers these parking brokers are able to mobilize parking consumers. This can be achieved by actively informing and advising parking consumers.

### Payment services that improve the user friendliness of parking

Current parking brokers already offer payment services that improve the user friendliness of parking for parking consumers in several ways:

- Reduce the risk of getting parking fines
- No more parking meter and cash payments for parking
- Pay with the smallest monetary unit or per minute of parking
- Start and stop parking by using your smartphone, cellphone or the internet

- Receive the bill for parking at the end of the month and have a good overview of value added tax (VAT) paid
- Different payment methods: Subscription or pay per parking transaction
- Multiple license plates can be registered

#### Reduces exploitation costs of parking facilities

The cashless payment services offered by parking brokers are reducing the exploitation costs in terms of costs for cash of parking facilities for parking operators and local governments.

## **5.2 Weaknesses of the current Parking Transaction Broker**

In this section the main weaknesses of the current parking transaction brokers are described.

#### Mainly active as payment service providers

Today's parking brokers are mainly active as payment service providers. Parking brokers are not yet actively informing and advising parking consumers about parking facilities.

#### Not involved in the marketing of parking facilities

Parking brokers are not yet actively involved in the marketing of parking facilities.

#### Limited amount of off-street parking facilities

The current services of the parking broker are mainly available for on-street parking facilities which are owned by local governments. Most off-street parking facilities which are operated by parking operators are still not available for the users of the services offered by the parking broker.

#### No ownership of physical parking spots

Parking brokers don't own parking facilities. Because of this they are very reliant of the cooperation of local governments and parking operators. For example, to offer reserved parking spots to parking consumers and to market parking facilities.

#### Mainly interesting for the heavy users of parking

Services offered by the current parking brokers are mainly interesting for the heavy users of parking. This is not only due to the fact that they do not yet actively inform and advise parking consumers but also because they charge an additional brokerage fee on top of the original parking tariff.

### Dynamic information about parking facilities in the hands of local governments and parking operators

Much of the dynamic information about parking facilities in the Netherlands is currently in the hands of local governments and parking operators. In order for parking brokers to actively and accurately advise and inform parking consumers about parking facilities, parking brokers will need to have access to the dynamic information of these parking facilities. This will not be possible when parking operators and local governments don't make this information public.

## **5.3 Opportunities for the current Parking Transaction Broker**

In this section the main opportunities for the current parking transaction brokers are described.

### Priced parking regulation is implemented in 155 local governments in the Netherlands

Many local governments have implemented priced parking regulation and therefore the services that the parking brokers offer can be used here. In addition to this local governments that are currently not using priced parking regulation might implement this in the future.

### The upcoming of mobile parking

Many parking consumers in the Netherlands are currently in the possession of a smartphone that supports parking services offered by parking brokers. In spite of this a lot of these parking consumers are still not using the (payment) services offered by today's parking brokers. It is expected by some experts that mobile parking and license plate parking will become the main payment methods for parking in the Netherlands within five years. The broker can expand its current payment services and create new services to attract more parking consumers for mobile parking. By doing this the current parking broker must make sure that the services they offer also become interesting for the broader public and not mainly for the heavy users of parking. An important question the parking broker should focus on is whether or not parking consumers are interested in having a mobile wallet.

### Actively informing and advising parking consumers about parking by using static and dynamic information of parking facilities on a national scale

Parking brokers should focus more on actively informing and advising parking consumers about parking by using dynamic and static information of parking facilities on a national scale. By doing this they will improve the user friendliness of parking for parking consumers. With the current developments which involve making this static and dynamic information publicly available on a national scale this can be

achieved. It is important for parking brokers to make good agreements with parking operators which ensure that this information is used in an objective manner as this is the main issue for parking operators. By working together parking brokers and parking operators can improve and create services which will improve the user friendliness of parking for parking consumers.

#### Connecting off-street parking facilities to services parking brokers offer on a national scale

It is important that the services parking brokers offer are available on a national scale in a large amount of parking facilities. Currently most off-street parking facilities that are operated by parking operators in the Netherlands are not yet connected to the services of parking brokers. In order to attract more parking consumers parking brokers should focus on making these off-street parking facilities available for the users of their services by working together with parking operators which are the owners of physical parking spots. The result of this will be that the difference between off-street and on-street parking will dissolve, making it easier for parking consumers to park their car at any location by using the same parking services.

#### The offering of reserved parking spots

By offering reserved parking spots to parking consumers the user friendliness of parking can be improved, especially for long term parking. Parking consumers are willing to pay to be ensured of a parking spot since not being able to find a parking spot is one of their main displeasures. In order to do this parking brokers need the cooperation of parking operators and local governments as they are the owners of physical parking spots.

#### The marketing of parking facilities and the final destination of the parking consumer

Parking brokers should actively focus on the marketing of parking facilities in combination with the marketing of the final destination of the parking consumer. The final destination or the event which is taking place attracts potential parking consumers and therefore parking facilities in the direct surroundings of this event should be actively marketed to them. Therefore in addition to actively informing and advising parking consumers about the parking facility and the event which is taking place, parking consumers should be stimulated by promotional activities. This implies that parking brokers should start alliances with the organizers of events and the owners of facilities that attract parking consumers such as shops, theatres, cinemas, restaurant and museums. Examples of actively promoting the parking facility in combination with the final destination are: couponing, combination tickets and in-store discounts. By doing this parking brokers can attract extra customers for the owners of facilities that attract parking consumers and create value for their customers in terms of customer experience and improving the user friendliness of parking.

Cashless payment possibilities are becoming more interesting for parking operators

Parking operators are becoming more interested in the cashless payment possibilities for parking consumers which are offered by the current parking brokers. By implementing these cashless payment services the exploitation costs of parking facilities can be reduced and the user friendliness of parking facilities for parking consumers is improved. Depending on the brokerage fee the parking brokers charge these cashless payment services could be very interesting for parking operators.

In most countries the payment services for parking facilities are only provided in local areas

The Netherlands is currently one of the leading countries with respect to the payment services which are provided on a national scale by parking brokers. Other countries often only have these payment services available in local areas. Parking brokers whom are currently mainly active in the Netherlands can expand their services to these countries to make them available on a much larger scale.

By removing the additional (subscription) fee on top of the parking tariff a much larger market penetration can be achieved.

The current parking brokers are charging an additional (subscription) fee on top of the parking tariff to parking consumers that are using their payment services. By removing this additional fee a much larger group of parking consumers will start using the services offered by parking brokers. In this way parking brokers will gain market power in terms of market penetration and will as a result of this become much more interesting for local governments and parking operators. In addition to this parking brokers with a large market penetration will be more interesting for car manufactures, this could be interesting for parking brokers in the long term.

Function as a “market master”

A parking broker can function as a sort of “market master” when it has a large amount of both on-street and off-street parking facilities connected to its services on a national scale. In combination with a large market penetration the parking broker will now be able to assign certain groups of parking consumers to specific parking facilities. They could do this by informing and advising parking consumers but also by regulating the parking facilities. For example, by offering parking facilities of businesses outside of work hours to the general public or by implementing flexible parking tariffs for different time periods of the day depending on the parking activity in the area of a parking facility. Another even more advanced possibility is the offering of private parking facilities of residents to the general public.

#### Implementing flexible parking tariffs in parking facilities

Parking brokers know where and when parking consumers that use their services park their cars. In combination with informing and advising parking consumers parking brokers can implement flexible parking tariffs for different parking facilities. This can be done by adjusting the parking tariff to different time periods of the day depending on the amount of cars parked in a certain parking facility. For example, parking consumers will be attracted by drastically lowered parking tariffs or are repulsed by the high parking tariffs and guided to other parking facilities.

#### Car manufacturers

In the long term car manufacturers might implement the services which are offered by parking brokers directly into the cars they manufacture. By doing this car manufacturers might choose to buy existing parking brokers or start strategic business alliances with parking brokers. The reason for this is that parking consumers are willing to use the services offered by parking brokers to which they are loyal and will therefore choose to have these specific services implemented in their cars. Because of this it is important for parking brokers to have a large market penetration in order to become interesting for car manufacturers.

### **5.4 Threats for the current Parking Transaction Broker**

#### Car manufacturers decide to create their own parking services

Car manufacturers can decide not to implement the current parking services that are offered by parking brokers into the cars they manufacture and will create their own parking services on a large scale.

#### Parking operators decide to create their own parking services

Parking operators decide to join strengths and exclude the parking broker by creating their own parking services. When agreements are not made properly and parking brokers would seriously harm parking operators this could happen. For example: when parking brokers do not use the static and dynamic information about parking facilities in an objective way. Parking brokers are reliant on the cooperation of parking operators as the main suppliers of off-street parking facilities. Local governments will be interested in services that function for both off-street and on-street parking facilities and the services created by parking operators will therefore be more interesting for them.

The upcoming of internet shopping

Due to the upcoming of internet shopping individuals will not use their cars anymore to go to shopping centers. In this way the demand for parking is decreasing at these shopping centers. However it is argued that this is mainly true for the weaker shopping centers where customer experience is of a lower value.

The future car is not driver assisted

In the long term cars will not be driver assisted anymore. Cars will be able to navigate by themselves and will park outside of areas where priced parking is implemented.

**Table**

<p style="text-align: center;"><b>Strengths</b></p> <ul style="list-style-type: none"> <li>• <u>Priced parking regulation is implemented in 155 local governments in the Netherlands</u></li> <li>• <u>National coverage</u></li> <li>• <u>Consumer knowledge of the parking consumer</u></li> <li>• <u>Able to mobilize parking consumers</u></li> <li>• <u>Payment services that improve the user friendliness of parking</u></li> <li>• <u>Reduces exploitation costs of parking facilities</u></li> </ul>	<p style="text-align: center;"><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>• <u>Mainly active as payment service provider</u></li> <li>• <u>Not involved in the marketing of parking facilities</u></li> <li>• <u>Limited amount of off-street parking facilities</u></li> <li>• <u>No ownership of physical parking spots</u></li> <li>• <u>Mainly interesting for the heavy users of parking</u></li> <li>• <u>Dynamic information about parking facilities in the hands of local governments and parking operators</u></li> </ul>
<p style="text-align: center;"><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• <u>Priced parking regulation is implemented in 155 local governments in the Netherlands</u></li> <li>• <u>The upcoming of Mobile parking</u></li> <li>• <u>Actively informing and advising parking consumers about parking by using static and dynamic information of parking facilities on a national scale</u></li> <li>• <u>Connecting off-street parking facilities to services parking brokers offer on a national scale</u></li> <li>• <u>The offering of reserved parking spots</u></li> <li>• <u>The marketing of parking facilities and the final destination of the parking consumer</u></li> <li>• <u>Cashless payment possibilities are becoming more interesting for parking operators</u></li> <li>• <u>In most countries the payment services for parking facilities are only provided in local areas</u></li> </ul>	<p style="text-align: center;"><b>Threats</b></p> <ul style="list-style-type: none"> <li>• <u>Car manufacturers decide to create their own parking services</u></li> <li>• <u>Parking operators decide to create their own parking services</u></li> <li>• <u>Internet shopping</u></li> <li>• <u>The future car is not driver assisted</u></li> </ul>



## 6. Conclusion

The Dutch parking market is currently subject to major changes and is therefore moving quickly. Recent trends in the (Dutch) parking market, such as the upcoming of mobile parking, license plate parking, the upcoming of online parking services and the Dutch government that is trying to make static and dynamic data of parking facilities in the Netherlands publicly available, are some examples of this. These trends have created market space for a new business in the parking market: the parking transaction broker. The parking transaction broker satisfies the needs of parking consumers in terms of service and therefore improves the user friendliness of parking facilities for parking consumers. The current parking transaction brokers are still mainly active as payment service providers but are increasingly becoming involved in traditional broker practices such as advising and informing parking consumers and by that actively mobilizing them.

From the literature review in combination with the personal interviews and the SWOT analysis it can be concluded that there are many different roles the parking transaction broker can fulfil in the future in terms of opportunities, however it must be noted that the visions from different stakeholders in the Dutch parking market are divided.

In the **first** place a parking transaction broker can intensify its business to consumer (B2C) focus by offering additional services such as actively informing and advising parking consumers about parking facilities by using static and dynamic information of parking facilities and by offering reserved parking spots. It is important that this happens on a national scale where both on-street and off-street parking facilities are connected to the services the parking broker offers. Parking brokers must make sure that not only the heavy users of parking facilities profit but that their services also become more interesting for the general public.

**Secondly** the parking brokers can increase their focus on the business to business (B2B) side of the parking market in which they actively market both the parking facilities of parking operators and local governments and the final destinations of parking consumers. By approaching the retail sector they can discuss possible promotional activities such as to compensate retail customers for parking through couponing, combination tickets and in-store discounts. Also other facilities and events that attract parking consumers such as museums, restaurants, festivals and theatres can have similar deals.

Next it becomes clear that car manufacturers will play a much more important role in the parking market of the future. The cars of the future will be able to navigate by themselves and will therefore

be able to park outside of areas where priced parking is implemented. In addition to this the cars of the future will have implemented parking services and therefore it is important for parking brokers to have a large market penetration in order for them to become interesting for car manufacturers to implement their parking services. Another role the parking broker can fulfil in the future when it has a large market penetration and a large amount of parking facilities connected to its services is the role of a “market master”. This involves the assigning of certain groups of parking consumers to specific parking facilities.

To conclude, the current parking brokers need the cooperation of both local governments and parking operators in order to achieve all sorts of new roles since they are the owners of physical parking spots. Therefore it is important for parking brokers to make good agreements with local governments and parking operators to make sure that they also benefit from the services offered by parking brokers. The facts that the parking broker knows the parking consumers and can mobilize them and the fact that cashless payment possibilities are becoming more interesting for parking operators and local governments can help parking brokers to achieve this. When these agreements are not made properly it could happen that parking operators create their own parking services and this could possible exclude the existing parking brokers.

### **Limitations and Further Research**

An important limitation of this paper is related to the fact that there was no interview performed with any representative on the field of parking of a local government in the Netherlands. As the local governments are very important stakeholders in the Dutch parking market their visions with respect to the Dutch parking market and the parking transaction broker should be very interesting. A more complete and therefore improved SWOT analysis of the parking transaction broker can be created when this interview is added to the research.

Another limitation of this paper is that the visions of all stakeholders in the Dutch parking market are very different and therefore the small group that was interviewed is not a sufficient representation of the entire Dutch parking market. In order to have a more accurate reproduction of the Dutch parking market and the parking transaction broker a much larger group of stakeholders must be interviewed. This could be done in the form of a survey which makes it easier to interview a large group of stakeholders in the Dutch parking market.

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## Appendix

### Interview Questions

#### *General Questions:*

- 1) What are your expectations concerning the general parking developments in the Netherlands?
- 2) What will the Dutch parking market look like in the future?
- 3) Which trends are currently visible in the Dutch parking market on the field of priced parking?
- 4) What are the most important drivers for parking consumers to park their cars at a certain parking facility?
- 5) How do you interpret parking service?
- 6) What are the (current) technological developments/ trends in the parking market?
- 7) What is a parking transaction broker and what role(s) does it have?

#### *More specific questions regarding the SWOT analysis for the parking transaction broker:*

- 8) What are the strengths of the current parking transaction brokers such as Yellowbrick, Parkline, Parkmobile and App parkeren?
- 9) What is the added value of a parking transaction broker for parking consumers / parking operators?
- 10) What are the weaknesses of the current parking transaction broker? / What does the current parking transaction broker miss?
- 11) What is missing in the current (Dutch) parking market?
- 12) What is the impact of the parking transaction broker in the (Dutch) parking market?
- 13) What are the opportunities for the current parking transaction brokers?
- 14) What could the current parking operator improve?
- 15) What are the threats for the current transaction brokers?
- 16) How do parking transaction brokers differentiate themselves?