

## Market Monitor 2010

The Market Monitor for 2010 describes developments in the electronic communications and postal markets. OPTA publishes this monitor every year with the goal of providing an objective view of developments in the markets that OPTA regulates. The Market Monitor is based on public information in OPTA's Structural Market Monitor<sup>1</sup>.

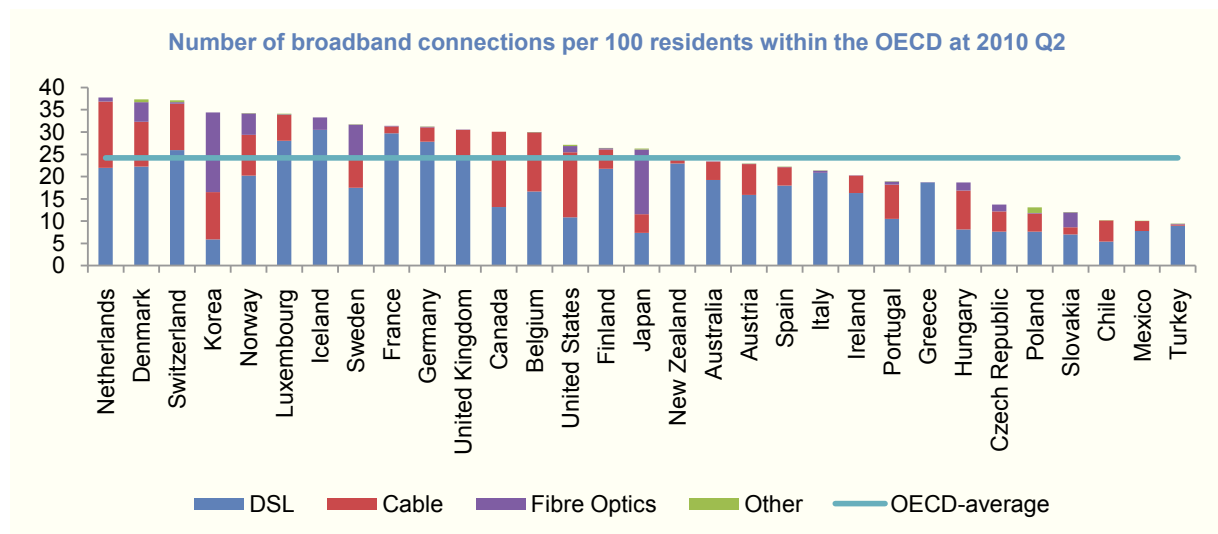
The Structural Market Monitor contains information that the major parties operating on the electronic communication markets periodically supply about their activities. This enables OPTA to keep a finger on the pulse in terms of developments in various markets.

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<sup>1</sup> Any deviations in relation to earlier publications are the result of corrections that companies reported to OPTA afterwards.

## Broadband: The Netherlands maintains its lead position

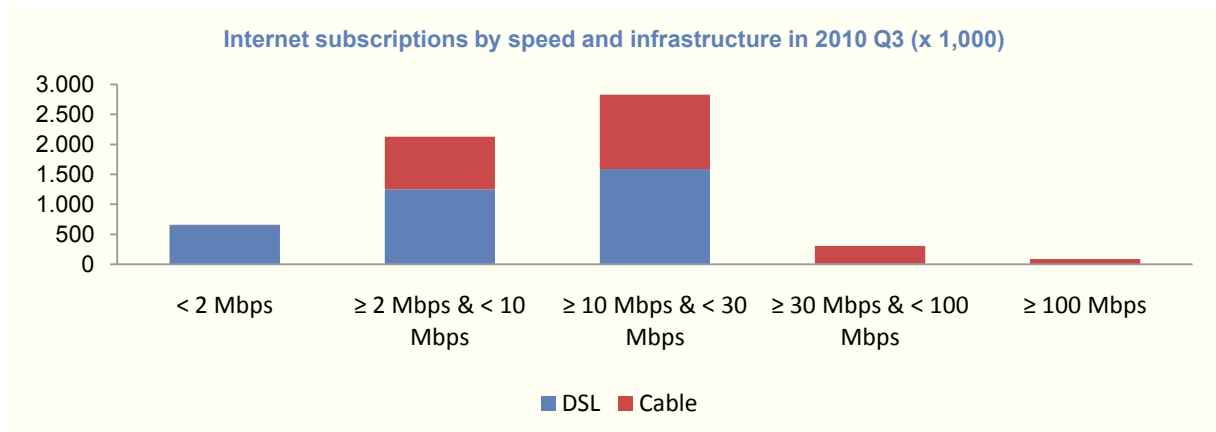
In 2010 the Netherlands still maintained its lead in terms of broadband among OECD countries<sup>2</sup>. At 37.8 broadband connections for every 100 residents, the Netherlands, like it did in 2009, has the highest rate of broadband penetration. The number of fixed broadband connections grew to 6,308,000 in the third quarter of 2010. In comparison to the end of 2009, this represents a flattening growth rate of 3%, which indicates there is market saturation. Korea, Japan and Sweden are in the lead in terms of the number of fibre optic connections.



## Increase in broadband speeds

In 2010 the European Commission presented the Digital Agenda 2010-2014. One of the Digital Agenda's objectives is for all residents of the European Union to have access to the internet at speeds exceeding 30 Mbps by 2020. In addition, the aim is for at least half of households to have access to the internet at a speed of 100 Mbps.

<sup>2</sup> Organisation for Economic Cooperation and Development.



In the third quarter of 2010, consumers were opting for internet access with maximum speeds of between 10 Mbps and 30 Mbps. The expectation is that the demand for and the supply of bandwidth will continue to rise in the coming years.

**Availability of broadband greater than 30 Mbps**

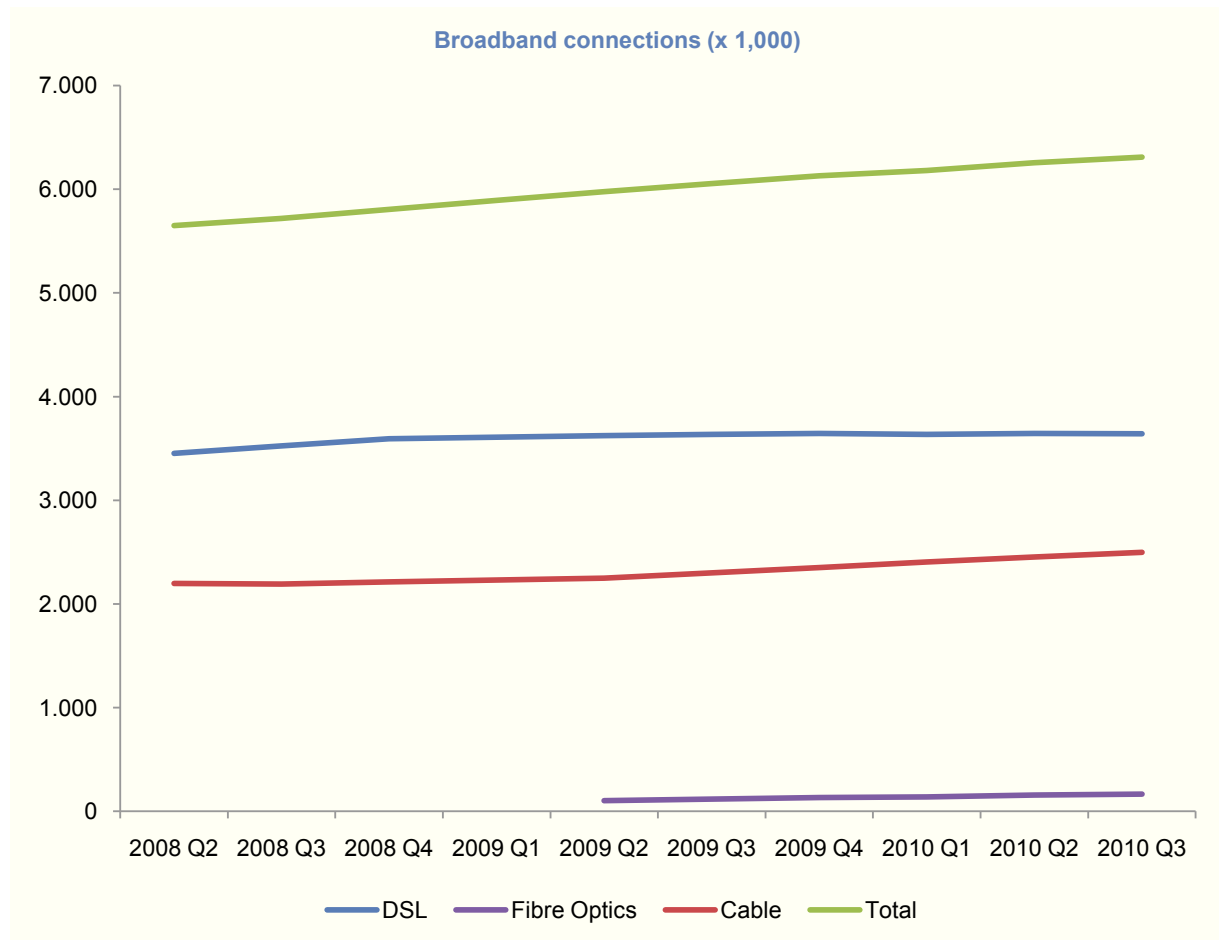


Most cable companies have largely upgraded their networks to DOCSIS 3.0, which enables them to offer internet speeds of up to 120 Mbps. DSL providers are in the process of upgrading their networks with

VDSL2 technology and are now offering internet speeds of up to 50 Mbps. Fibre optic networks that offered speeds of approximately 100 Mbps in 2010 are available to the residents of a number of municipalities.

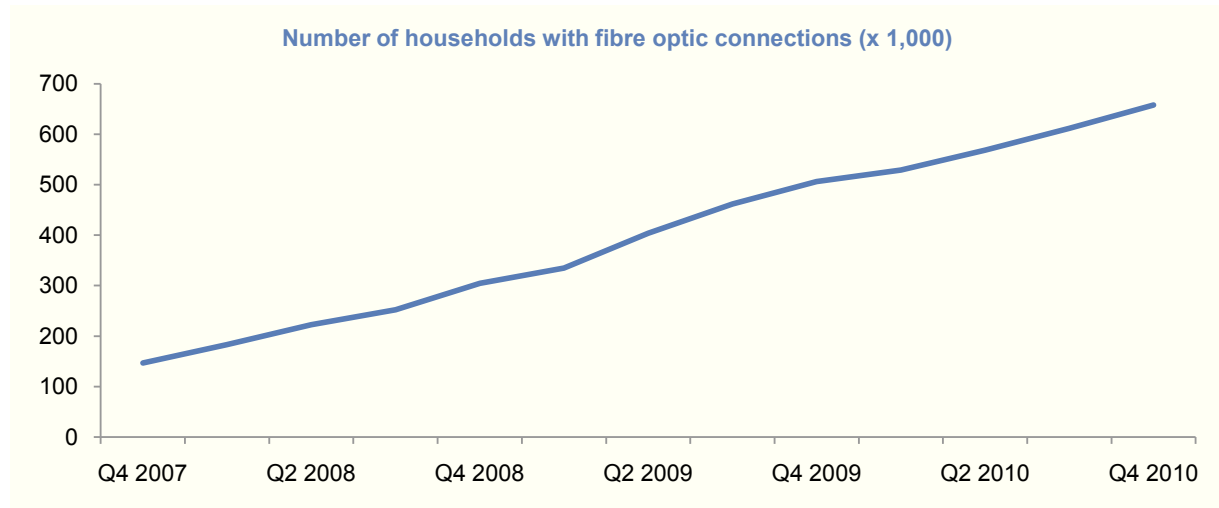
### Increased competition among networks

In 2010, DSL, at 3.6 million connections, was the most popular network. Cable was number two at 2.5 million connections. Growth in broadband via DSL was stagnant in 2010, while the number of broadband connections via cable grew by approximately 8.6% in comparison to the third quarter of 2009. Fibre optics increased by approximately 51 percentage points from 104,000 active connections in mid-2009 to 157,000 connections by mid-2010. At the end of the third quarter of 2010, 57.7% of the total number of broadband connections was provided via DSL, 39.6% via cable and 2.6% via fibre optics.



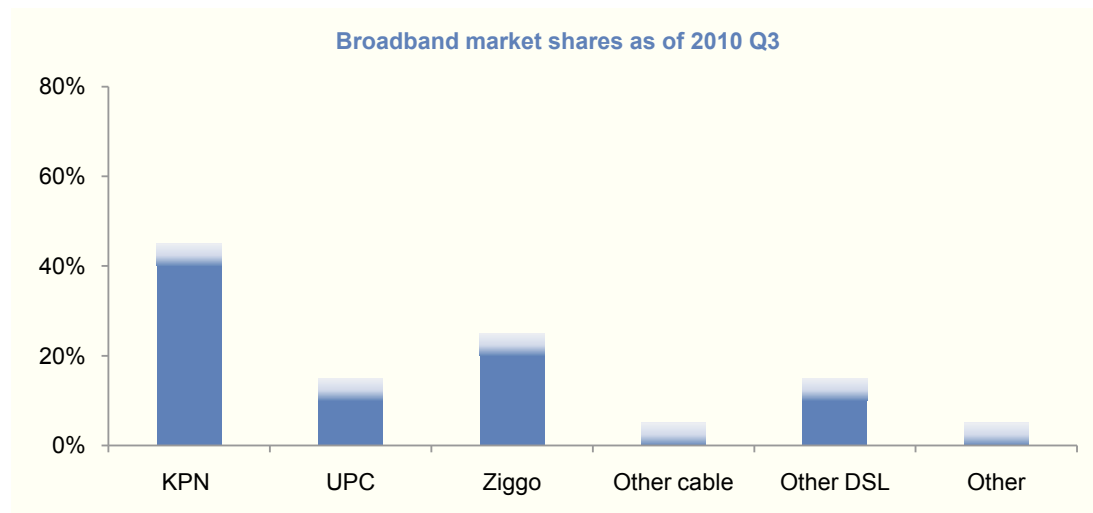
### Growth in the rollout of fibre optics

Fibre optic companies continued to roll out their networks in 2010. Reggefiber, the largest provider of fibre optic connections in the Netherlands, reported 658,000 connected households in the fourth quarter of 2010.



### Market share ratios unchanged

The trends associated with each type of infrastructure in 2010 did not result in a drastic shift in the market shares of the players operating on the broadband internet market. The market shares of the major players in 2010 are comparable to those of 2009: KPN continued to maintain its 40%-45% share, followed by Ziggo at 20%-25% and UPC at 10%-15%. Aside from KPN, the joint market share of DSL providers was 10%-15%. In comparison to mid-2007, KPN's market share and the joint market share of the players that currently make up Ziggo, declined. The market share of other players with alternative networks, such as fibre optics, rose in comparison to the second quarter of 2007.

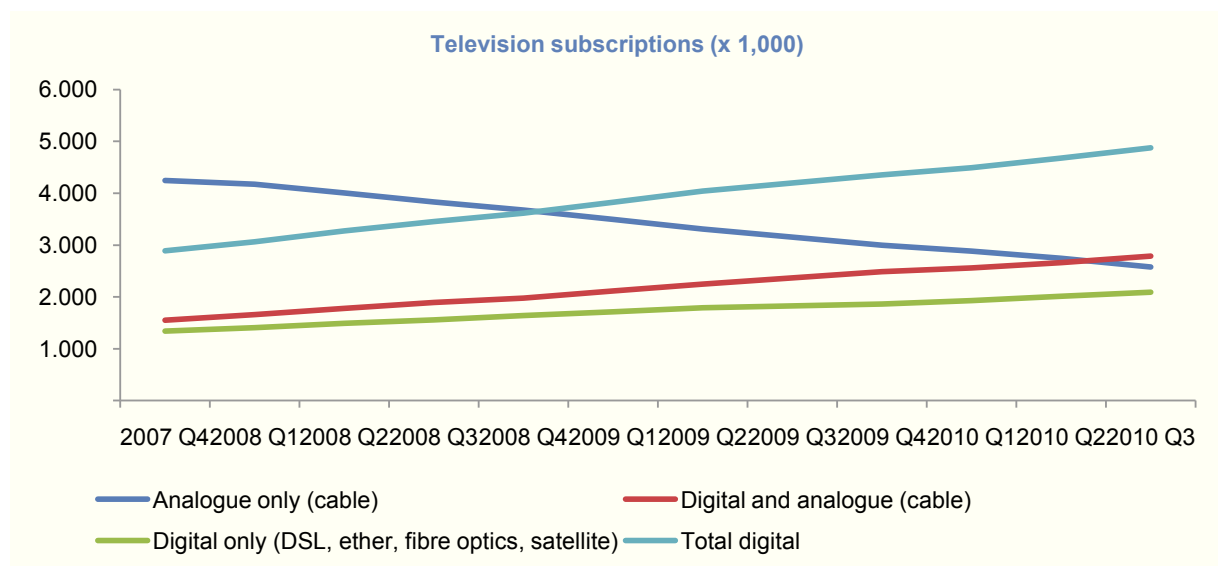


## Television: most cable customers subscribe to digital television

Consistent with previous years, many consumers also opted for digital television in 2010, digital television services are expanding and the rates for the standard television package are rising. A few cable companies are permanently shutting down their analogue television signal.

### Cable and digitisation

2010 was the first year in which the number of households subscribing to digital television via cable exceeded the number of households subscribing to only analogue television via cable. The growth of digital television has been about 10 percentage points per year for the last few years. In September 2010, 65% of consumers had digital television. Only one third of all consumers had only an analogue television subscription. Consumers are primarily opting for digital cable television that includes analogue television.



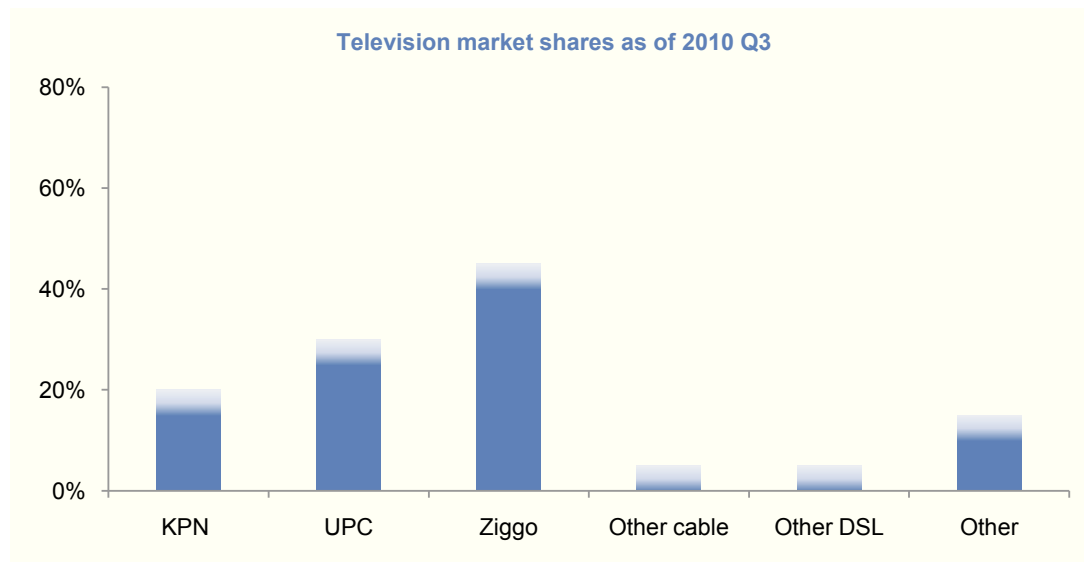
The cable companies CAIW and REKAM are making inexpensive decoders available to their customers for receiving digital television as a means of facilitating the shutdown of analogue television. In October 2010, CAIW was the first cable company in the Netherlands to shut down analogue television, followed by REKAM.

For other major cable companies, the number of digital television subscribers as at the end of September 2010 was between 45% and 55%. Generally, this concerns digital television on the primary television set and analogue television is still being viewed on the remaining television sets. As the largest cable

company in the Netherlands, Ziggo at the end of 2010 indicated that it will reduce its analogue package in 2011, but that it will only consider disconnecting its analogue signal once the use of digital television has increased.

### Development of the competitive playing field

There were over 7.5 million television subscribers in September 2010, of which 5.4 million were cable subscribers. This represents approximately 72% of the total. The other infrastructures, ether, DSL, fibre optics and satellite jointly had 2.1 subscribers. As such, the share of television subscriptions via an infrastructure other than cable grew from 24% in mid-2009 to 28% in September 2010.



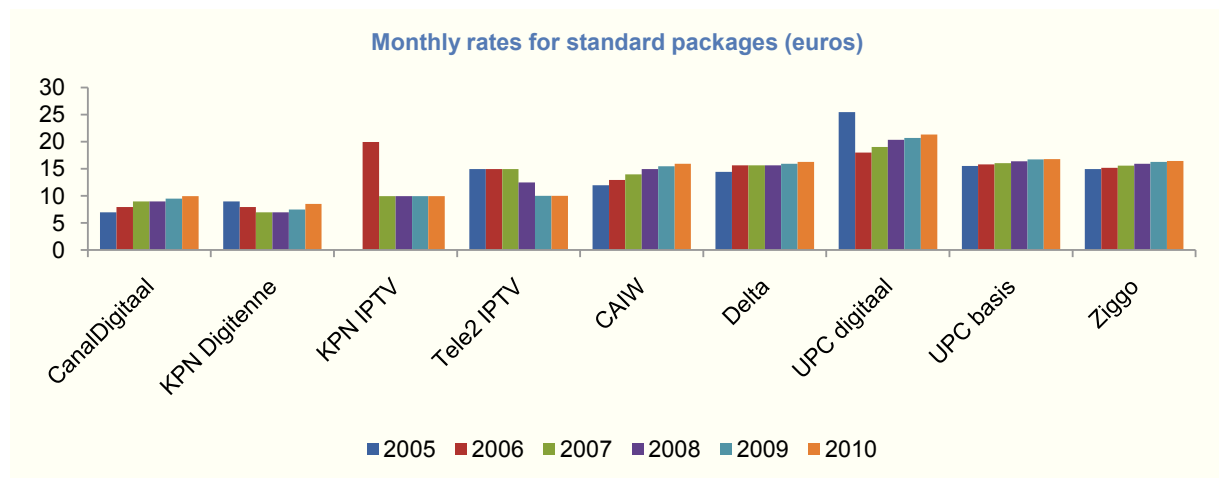
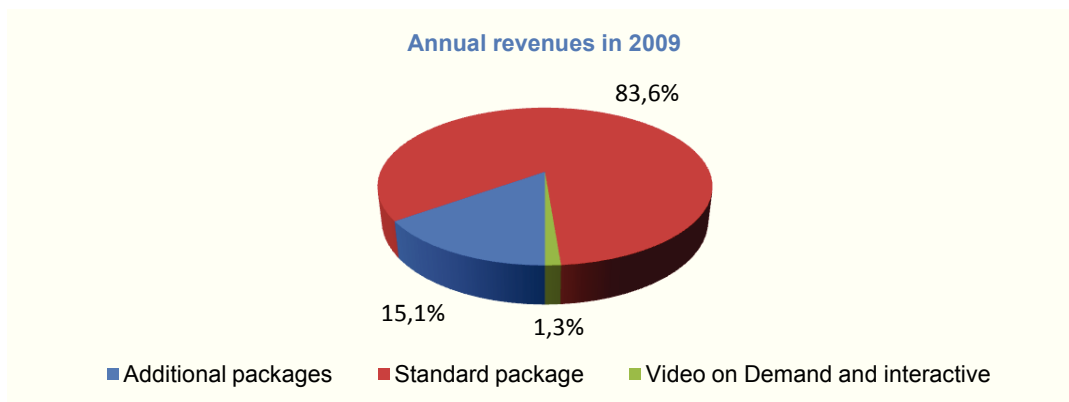
KPN is the largest competitor of the regional cable companies. Although KPN in past years exhibited strong growth in the television market with its digital ether TV (Digitenne), growth in 2010 was primarily achieved through the rising sales of IPTV. This is digital TV with a larger package of digital and interactive features. KPN reports 30% growth per quarter with more than 300,000 IPTV subscriptions by year-end 2010<sup>3</sup>. In 2010, Scarlet and Online started offering digital ether TV. New fibre optic providers also offer television.

In comparison to the second quarter of 2007, the market share of all cable companies declined. The same applies to players offering services over alternative infrastructures. By contrast, KPN's market share rose by approximately 10% to 20% in comparison to mid-2007.

<sup>3</sup> KPN quarterly figures Q2, Q3 and Q4 2010 <[www.kpn.com](http://www.kpn.com)>.

## Increase in revenues and rates in 2009

The annual revenues of television providers in 2009 were € 1.25 billion. The revenues of television providers have been rising faster than the number of subscriptions for years. Annual revenues on average rose by 8% since 2006, while the annual number of subscriptions rose by approximately 1% each year. The increase in revenues is in part due to the annual rate increase for most basic packages, but even more due to the fact that consumers are increasingly purchasing plus packages, new services, such as Video on Demand and peripheral equipment.



## Expansion of television services

Cable companies focused their advertising on HD packages, interactive features for missed programmes and Video on Demand. Most cable companies in 2010 expanded their HD offer with the 10 most viewed HD channels. Ziggo, together with SBS, added a 3D channel and 3D films on demand to its package. In addition to TV sets, 64% of consumers in 2010 also had a recording device such as a DVD recorder, a



video recorder or an HD recorder<sup>4</sup>. In addition, in September 2010, UPC launched a mobile application that permits customers to set their UPC digital recorder remotely.

In 2010, UPC and Ziggo also added various local channels to their digital offer that up until now could only be viewed as analogue channels. Programme councils require these channels to be broadcast digitally as well, now that increasing numbers of viewers are watching digital TV.

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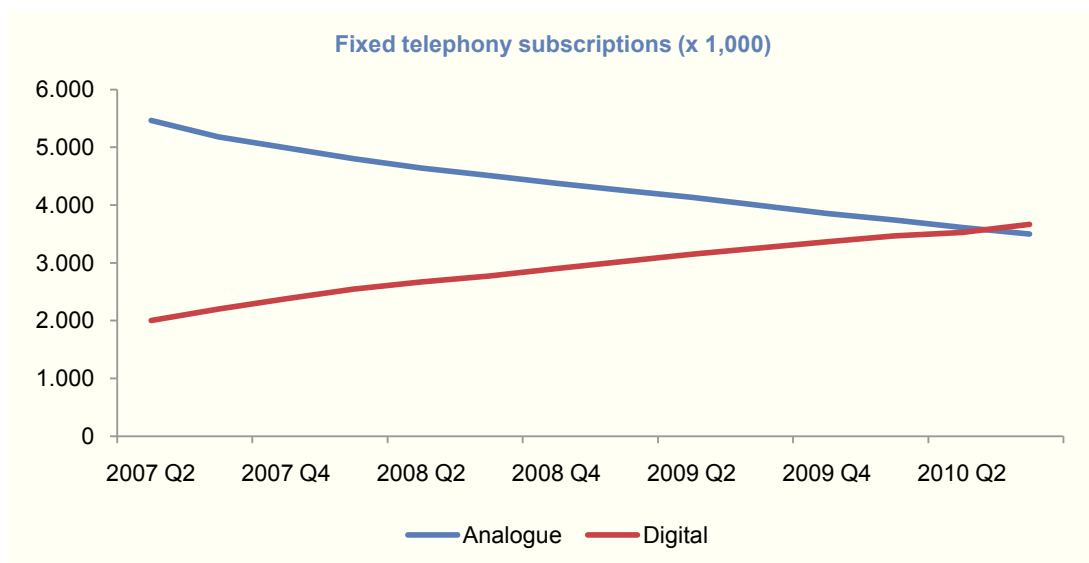
<sup>4</sup> Veldkamp, Consumer TV Survey, 2011.

## Fixed telephony: more digital than traditional connections

Most consumers with a fixed telephony subscription use a digital connection for placing their calls. The total number of subscriptions with a fixed telephone connection declined by about 1.9 percentage points.

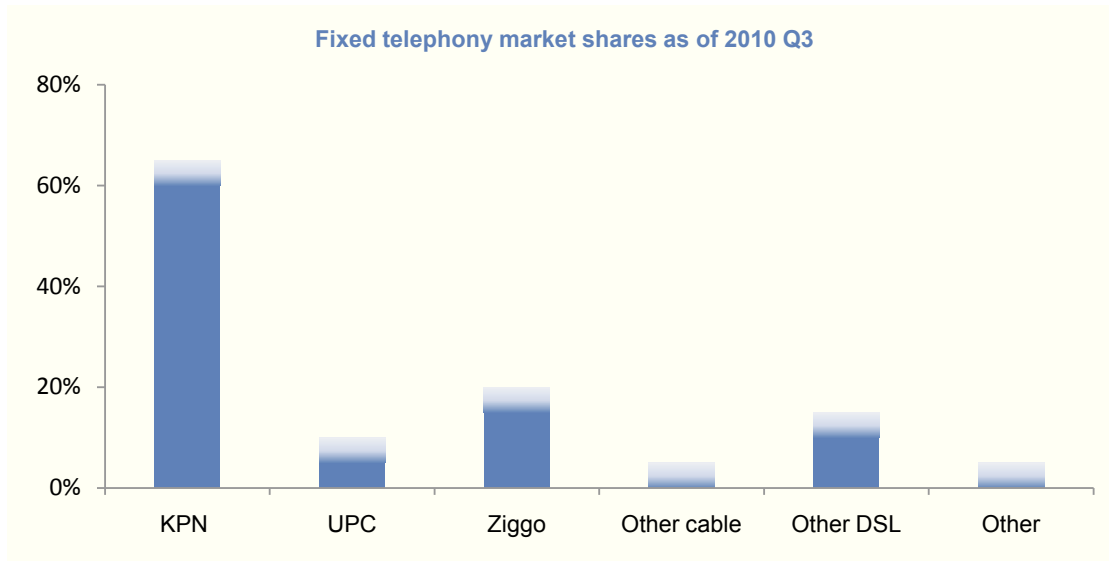
### More than half of telephone connections is digital

As of the third quarter 2010, the number of digital telephone connections is greater than the number of traditional analogue telephone connections. The number of digital telephone connections rose by 5.9 percentage points from 44.9% in the third quarter of 2009 to 50.8% in the third quarter of 2010. On the other hand, the number of traditional telephone connections over the same period declined by 5.9 percentage points from 55.1% to 49.2%. The total number of fixed telephony subscriptions declined by 1.9 percentage points, while the decline in the previous year was only 0.4 percentage point.



### Ziggo's market share is increasing

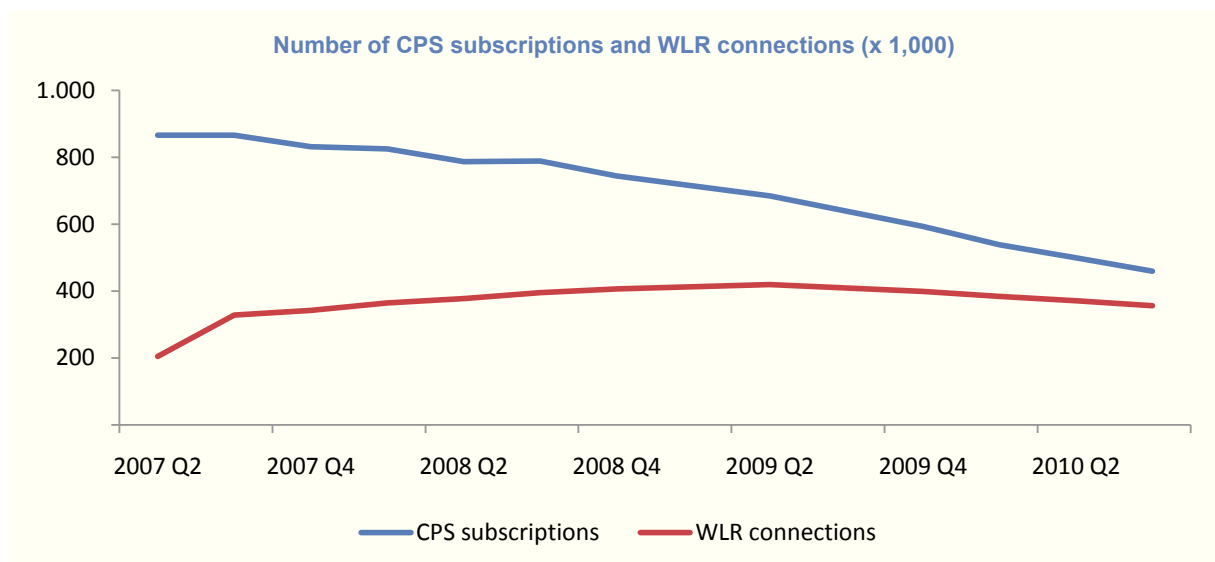
In terms of market shares, a shift is in particular discernable in relation to Ziggo. Ziggo's market share rose from 10%-15% to 15%-20%. The market shares of the other fixed telephony providers stayed within the same range as they were in 2009. In comparison to the third quarter of 2007, KPN's market share declined to the benefit of the other providers whose market shares rose by 0% to 10%.



### Resale of telephony services

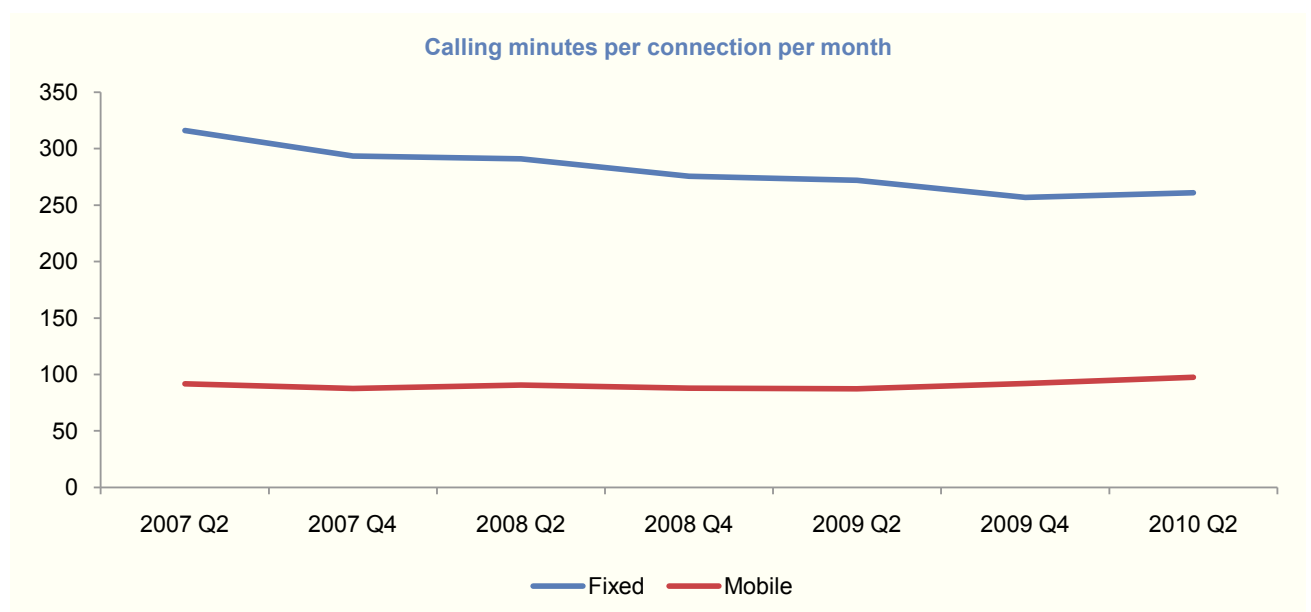
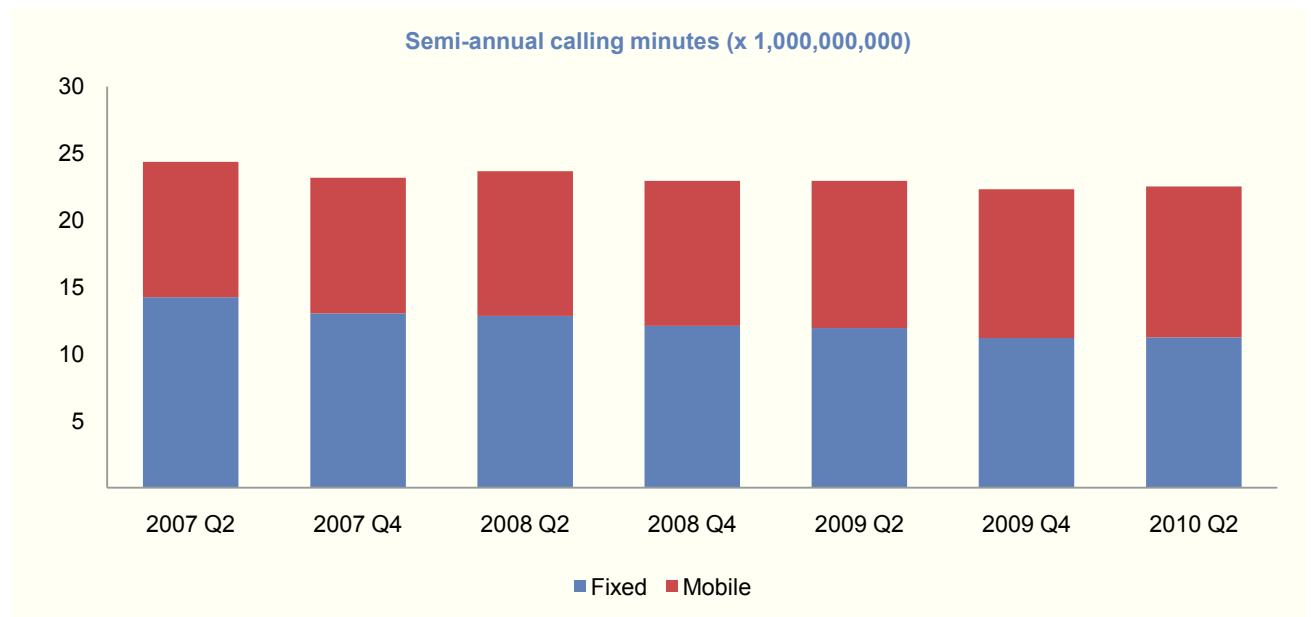
As in previous years, market players could resell KPN's services to consumers in 2010. Common services include wholesale line rental (WLR), in which the connections are taken over, and carrier preselect (CPS), in which calling minutes are resold.

Following a peak in 2009, the number of WLR connections exhibited a declining trend. Following a high of 419,000 connections in mid-2009, the number of connections in the third quarter of 2010 declined to 356,000. The number of CPS subscriptions is experiencing a steady decline from 685,000 in the second quarter of 2009 to 459,000 in the third quarter of 2010.



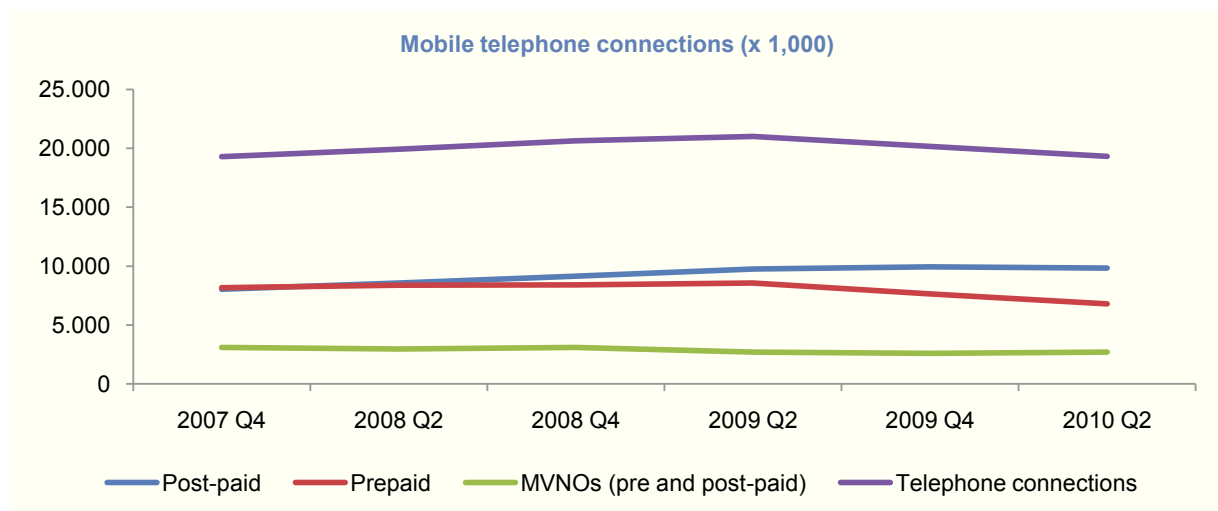
## Calling patterns

In the first half of 2010, all residents of the Netherlands combined made 5.9 percentage points fewer calls via a fixed connection than they did in the previous year. This represents a total of 11.2 billion calling minutes via a fixed line. At 11.3 billion calling minutes via mobile telephones, it is the first time that more calling minutes were placed via mobile telephones than fixed lines. The average number of calling minutes per fixed connection per year is declining from approximately 3,284 in 2009 to approximately 3,106 in 2010. The average number of calling minutes per mobile connection by contrast is increasing from 1,050 to 1,137 per year. The overall calling volume declined by 1.8 percentage points.



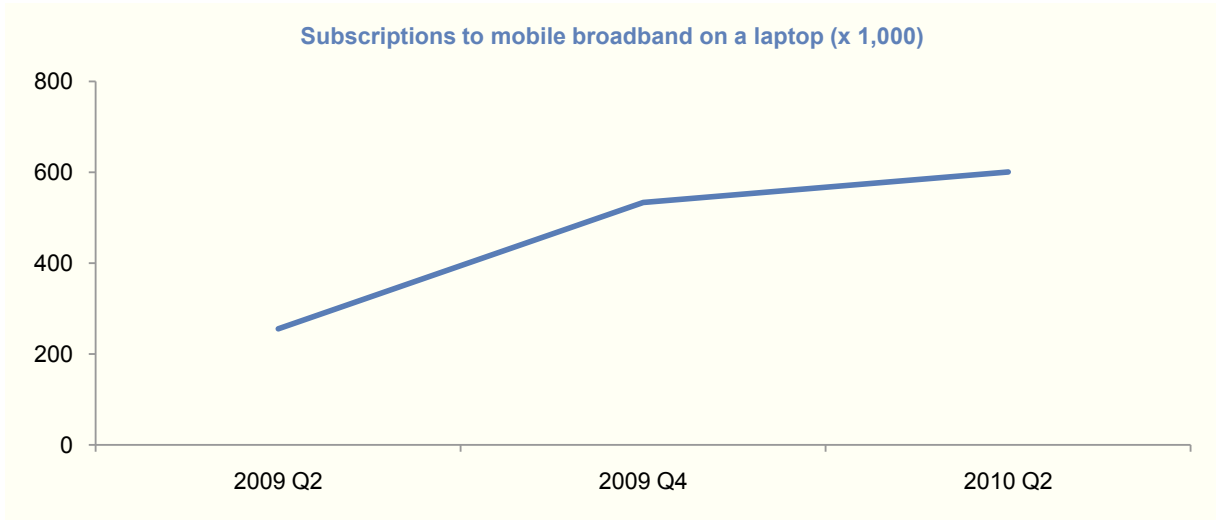
## Mobile telephony: sharp growth in mobile broadband

The number of mobile telephone connections declined from 20.1 million connections at the end of 2009 to 19.3 million in 2010. The start of a declining trend in the number of prepaid connections became perceptible at the beginning of 2009. In 2010, the decline for the first time was also caused by a decline in the number of post-paid connections, or subscriptions. This number declined from 9.9 million in the fourth quarter of 2009 to 9.8 million connections six months later. The number of connections supplied by virtual mobile providers (MVNOs)<sup>5</sup>, prepaid as well as post-paid, rose by 4.5 percentage points to 2.7 million.



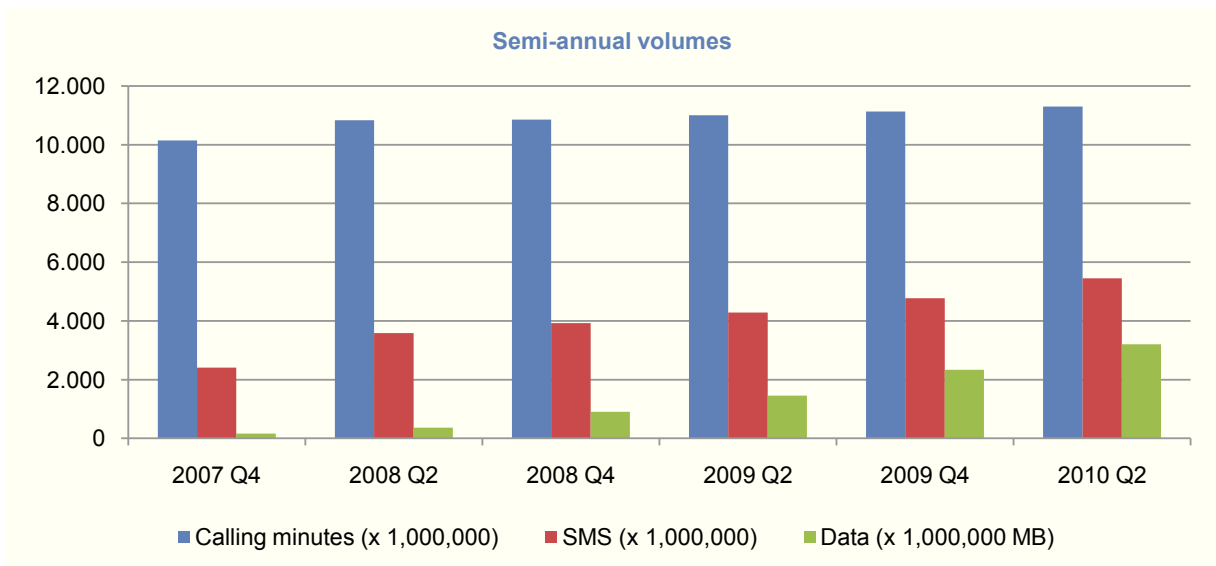
While the number of mobile telephone connections on the one hand declined, steadily increased use is being made of the mobile internet on the other hand. The number of separate mobile broadband connections, such as dongles, grew sharply from 0.3 million in 2009 to 0.6 million in 2010. OPTA does not have access to a reliable figure concerning the number of mobile broadband connections via smartphones. This figure is estimated to be 3.7 million as at mid-2010.

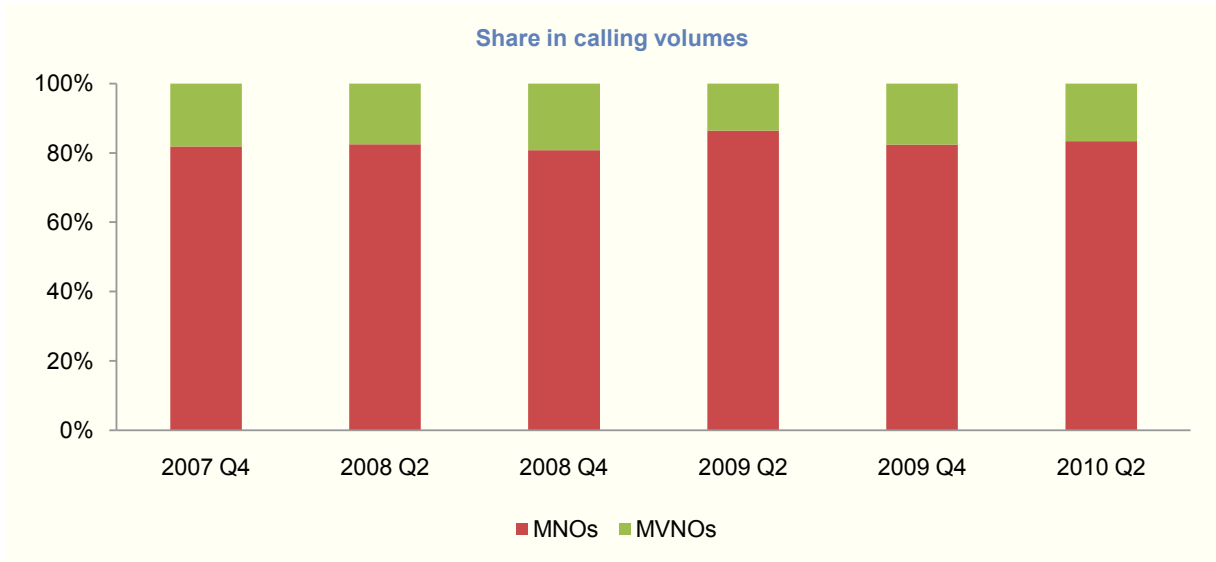
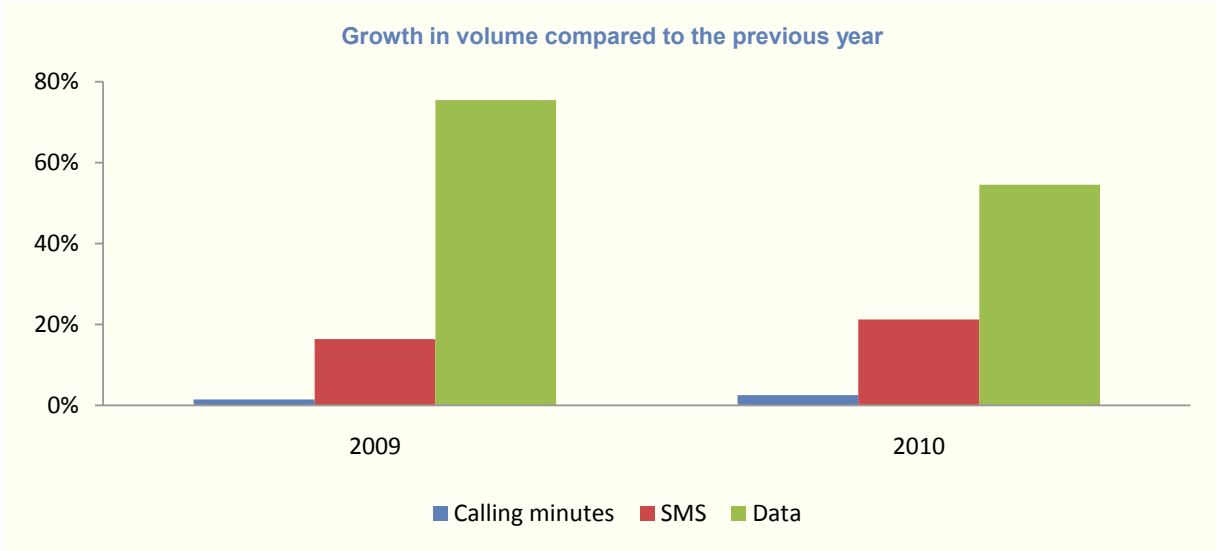
<sup>5</sup> Players without their own mobile network, who use the network of another player for the purpose of providing their services.



### Call, SMS and data volumes

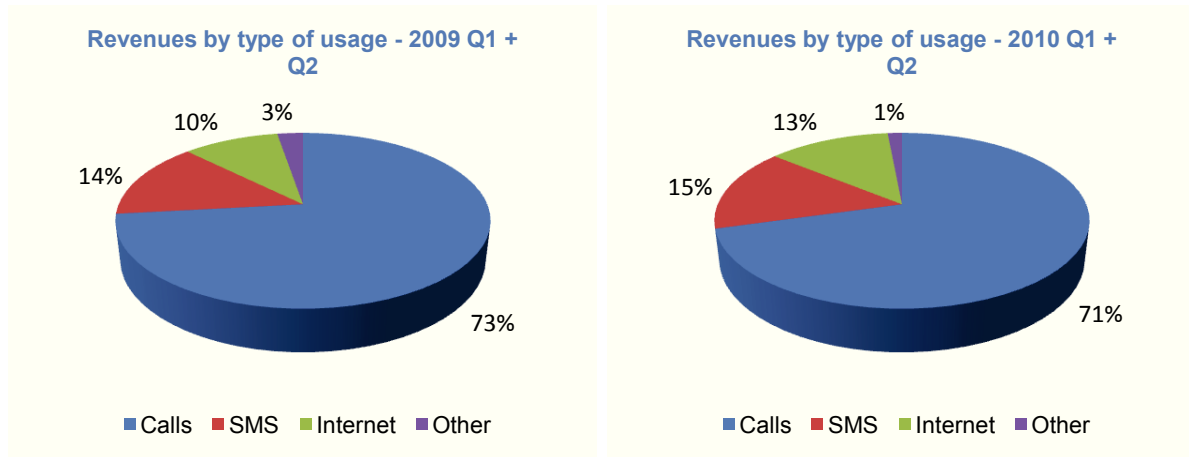
The volume of calling minutes via mobile telephones continues to rise in spite of the declining number of connections. During the first six months of 2010, the number of mobile calling minutes was 11.3 billion. During the same period in 2009, this number was 11.0 billion minutes. The number of SMS messages sent also continues to go up. In 2009, over 9 billion SMS messages were sent throughout the entire year. In the first six months of 2010, the count already stood at nearly 5.5 billion SMS messages. At 3.2 petabytes, data use multiplied eightfold in the first six months of 2010 in comparison with the first six months of 2009.





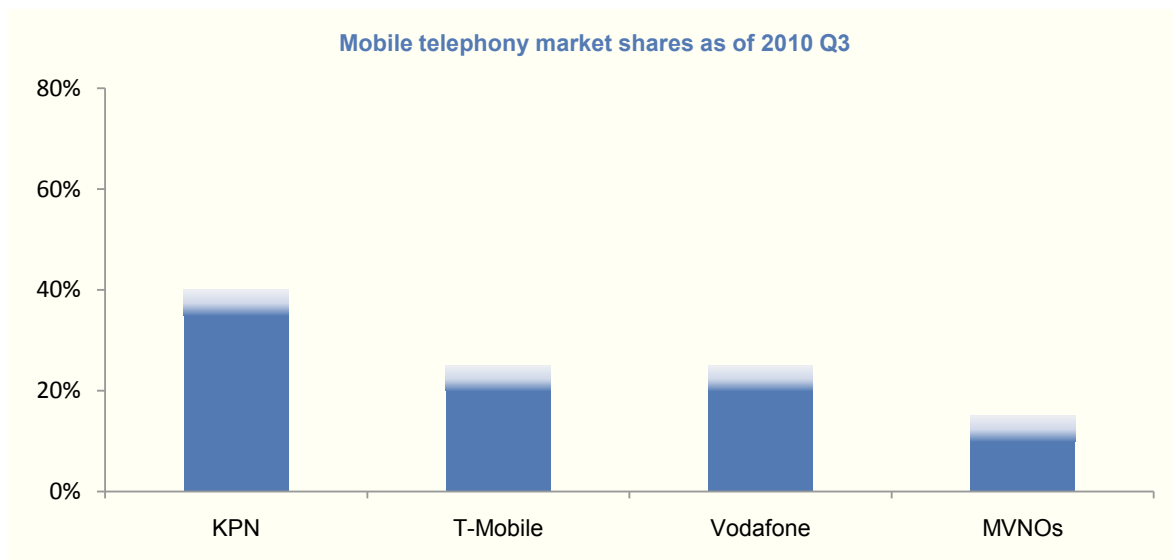
## Mobile telephony revenues

Total revenues rose by 0.5% in the first half of 2010 in comparison to the same period in 2009. Total revenues in the first half of 2010 amounted to € 2.41 billion. Revenues from SMS services and data services once again rose, while revenues on voice and other services declined somewhat.



## Market share ratios

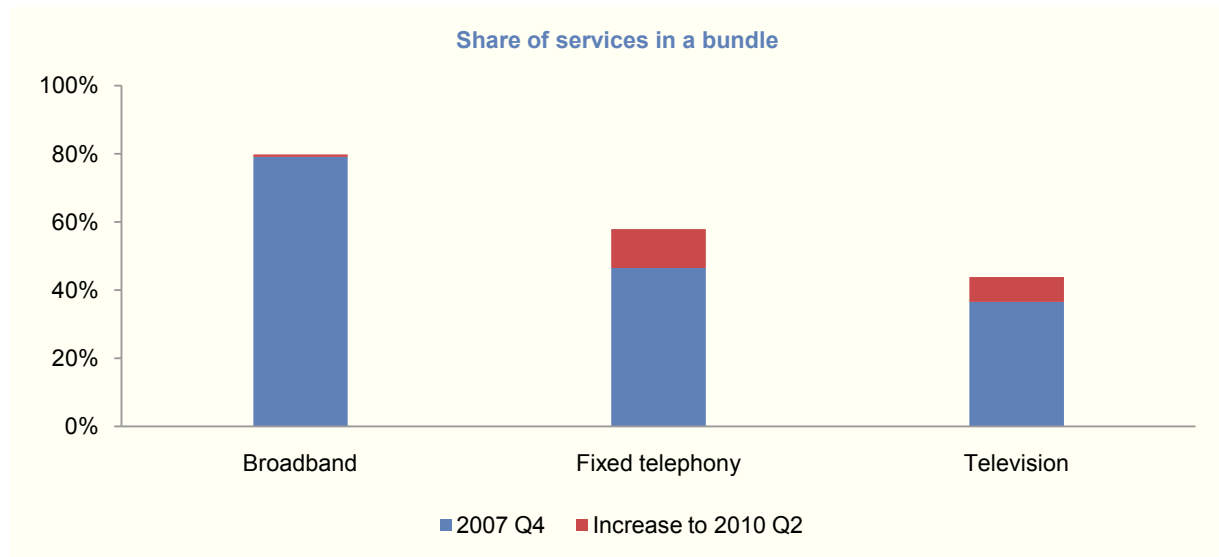
The trends identified above did not result in a significant change in market shares: KPN in 2010 remained the largest provider at 35%-40%, followed by T-mobile and Vodafone at 20%-25% each. Vodafone's market share rose in comparison to 2007.





## Bundles: triple play the most popular and growing.

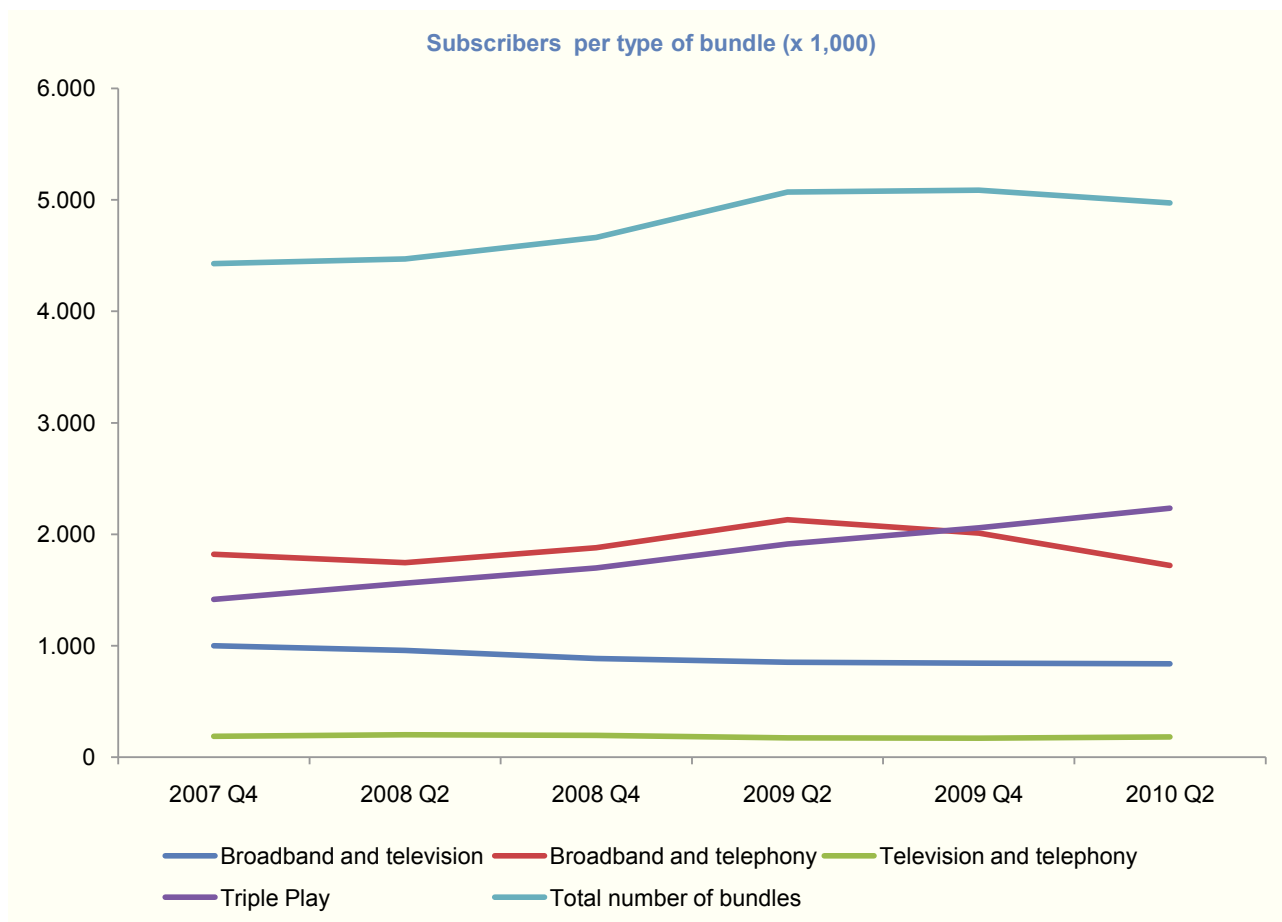
Up until 2006, fixed services, such as broadband internet, telephony and television were primarily sold separately. Most households had different providers for different services. Starting in 2007, an increase in the bundling of services was perceptible, for example, telephony combined with television or broadband internet. In 2010, the total number of bundles declined somewhat due to a sharp decline in the number of bundles with fixed telephony and broadband internet.



In 2010, broadband internet in most cases was acquired as part of a bundle (80%), followed by a growing share of fixed telephony (58%) and television (44%). Television services in most instances (56%) are therefore still acquired separately by consumers.

## Triple play continues to grow

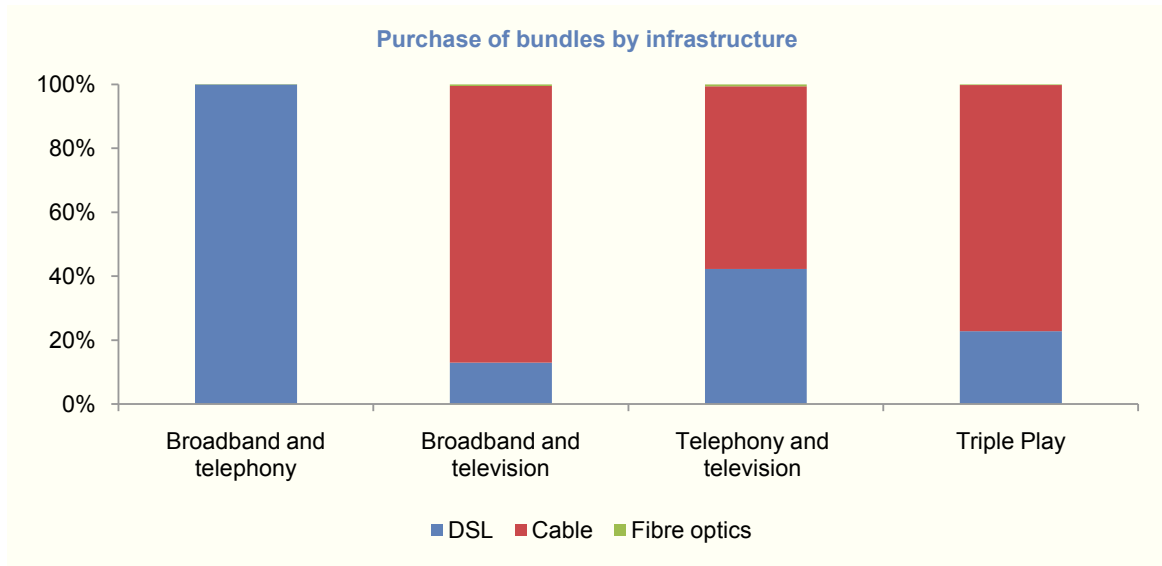
The number of subscriptions with a bundled package remained reasonably stable at 5 million connections in 2010. Triple play, a bundle with television, internet and telephony, remained the most popular bundle in 2010 at 2.2 million subscriptions. This bundle was purchased by 30.1% of households. In addition to the cable companies, other players are also anticipating this need. This translates into a growing number of providers of bundles.



The triple play bundle is the most popular and last year grew by approximately 0.3 million subscriptions. A declining number of 1.7 million households (23.2%) purchase a bundle comprised of broadband and fixed telephony. Approximately 0.8 million households (11.3%) opt for a bundle comprised of broadband and television. Finally, almost 0.2 million households (2.5%) make use of a bundle comprised of television and fixed telephony. The combined offer of mobile telephony with one or more fixed services is only available and acquired to a limited degree.

### Infrastructure

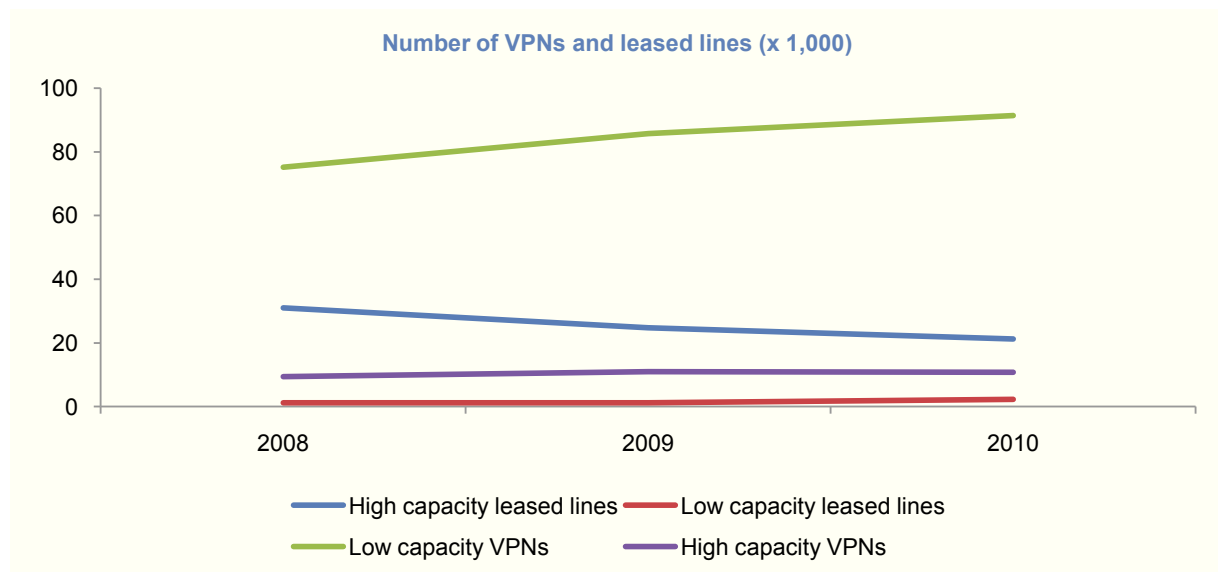
Some bundles are more popular on one infrastructure rather than another. For example, triple play and duo play bundles comprising broadband and television are primarily purchased via cable from players such as UPC and Ziggo. Due to the fact that cable companies generally offer television as part of a bundle, they generally do not offer dual play bundles comprising fixed telephony and broadband, and consumers purchase such bundles from DSL providers such as KPN. Providers on fibre optic offer approximately 1% of the total number of bundles and primarily in bundles that at the very least include broadband and television.



## Leased lines: transition from analogue lines to VPNs

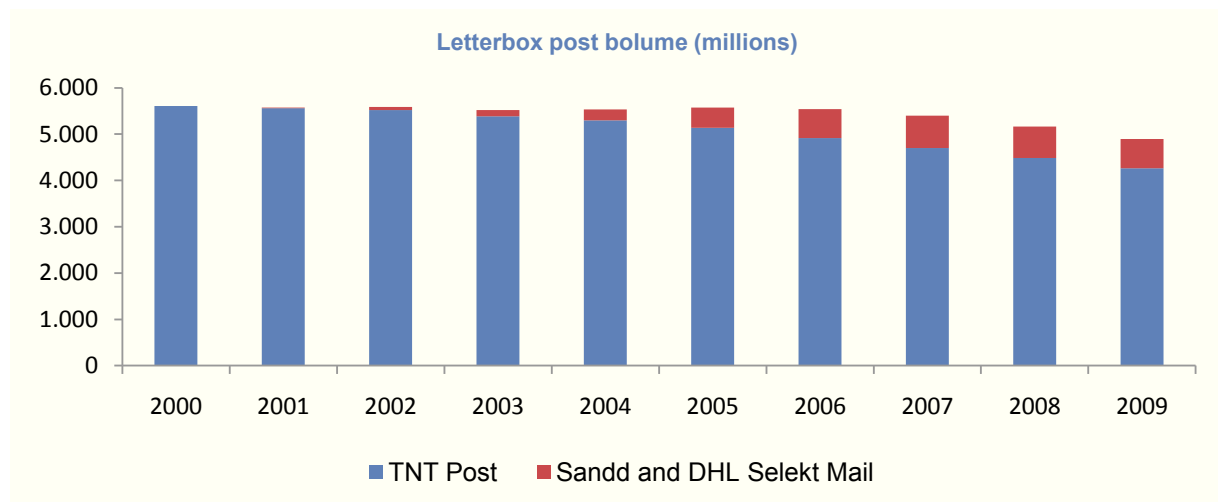
Leased lines and virtual private networks (VPNs) are used by commercial customers with multiple business units for the purpose of linking these sites. This enables internal data communications and telephony between these business units to be securely implemented. While the larger share of connections is still effected via copper lines, more and more companies are switching over to fibre optics. The growth in the number of active fibre optic connections consequently was approximately the same in 2010 as it was in 2009. Due to the lower cost of fibre optic connections and the increasing coverage provided by fibre optic networks, fibre optics is becoming increasingly attractive to more and more customers.

KPN in 2010 announced that it plans to phase out its offer of analogue leased lines by 2012. In addition, an increase in the cost of leased analogue lines was evident. At the same time, OPTA is observing a persistent decline in the cost of VPNs. The trend observed last year involving the transition of customers from traditional leased lines to data communication services is consequently persisting in 2010 as well.



## Postal market: decline in revenues as well as volumes

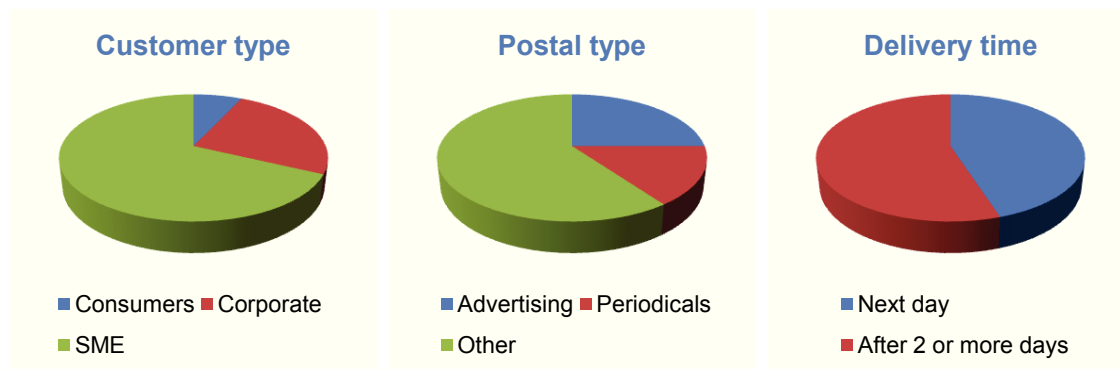
Almost 5 billion addressed postal items were delivered in the Netherlands in 2009. This number was approximately 4.8 billion in 2010. This represents a 4% decline in volume in 2010 compared to 2009. The year prior to that, the decline was approximately 5%. At € 1.7 billion, revenues in the postal market were 6.5% lower than they were in 2008. Compared to 2005, the volume of letterbox post declined by approximately 10%<sup>6</sup>.



## Letterbox post market segments

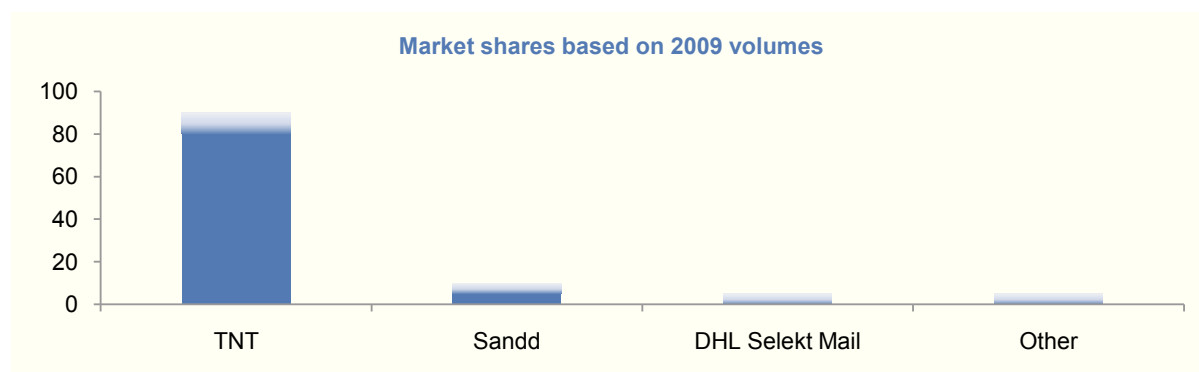
With the exception of consumer post, the volume of letterbox post between 2008 and 2009 declined in all segments at approximately the same rate of 4.8%. The volume of consumer post is an exception to this with a relatively sharp decline of 6.2%. The SME segment exhibits the largest share of post sent. This share rose by approximately 2% compared to last year and is at the expense of the corporate business segment. For more than half of all post, the sender opts for delivery times of two or more days.

<sup>6</sup> OPTA is asking players in the post sector to provide information once a year. Currently no figures for 2010 are as yet available.



## Competitor trends

TNT Post's share, including its subsidiary, VSP, remained stable in 2009. The market share of competitors consequently remained stable as well, although Sandd gained market share from DHL Selekt Mail in 2009.



Competition in 2009 was also primarily focused on the delivery of advertising post and periodicals, such as magazines. Sandd managed to gain market share from TNT Post in the periodicals segment. DHL lost market share in the advertising post segment and in 2009 had a market share of 0%-5% instead of a market share of 5%-10% in 2008.

## Postal carriers

In 2009, 63,000 persons were employed as postal carriers. This represents a decline of 3% compared to 2008. Two thirds of postal workers are employed under an employment contract. These postal workers are primarily employed by TNT. The remaining postal workers are employed by other postal carriage firms, generally on the basis of an agreement of assignment. Of the remaining postal carriage firms only sheltered workshops still employ carriers with a (subsidised) employment contract. Almost 90% of all postal items in 2009 were delivered by carriers with an employment contract.

## Internet security: increase in spam originating from Europe

The market does not provide any figures about internet security. OPTA therefore uses public sources for this purpose. The figures presented in this section are therefore indicative.

### Cybercrime and Digital Security Trend Report

In 2010, OPTA collaborated on the Cybercrime and Digital Security national trend report published by Govcert<sup>7</sup>, the Dutch government's Cyber Security and Incident Response Team. This report describes the key trends in the area of cybercrime and digital security. The key trends are that cybercriminal behaviour<sup>8</sup> is becoming more advanced and focused, the threat of digital espionage is increasing and the illegal use of the internet for political reasons is especially focused on threats, defacements<sup>9</sup> and propaganda. In addition, citizens, companies and governments appear to be vulnerable to digital abuse and privacy is under pressure.

### Spam

Most spam is sent by botnets, groups of hacked computers that are centrally controlled<sup>10</sup>. In August 2010, the volume of spam within the total volume of e-mail sent peaked at 92.2% as a result of the 'Rustock botnet'. That month, this botnet was responsible for the rapid distribution of huge quantities of malware as a result of which the volume of spam increased. The average volume of spam as a percentage of e-mail traffic over the entire year was established at 89.1%. This represents an increase of 1.4% in comparison to the year before.

In comparison to 2009, this represents an increase for Europe, a decrease for South America and a similar level for Asia. The European increase is primarily due to the transmission of spam from East European countries. This is probably related to a combination of increased internet availability in these countries and tactical reasons on the part of cybercriminals to decide to operate from these countries. The volume of spam originating from African countries has increased for the same reasons.

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<sup>7</sup> This report was prepared on the basis of information from different organisations, including OPTA. For more information: <[www.govcert.nl/onderwerpen/trends+en+statistieken/trends-en-statistieken.html](http://www.govcert.nl/onderwerpen/trends+en+statistieken/trends-en-statistieken.html)>.

<sup>8</sup> Any punishable behaviour for the purpose of perpetrating a cybercrime in which the use of automated works in processing and transferring information is of predominant significance.

<sup>9</sup> An attack on a website that alters its appearance.

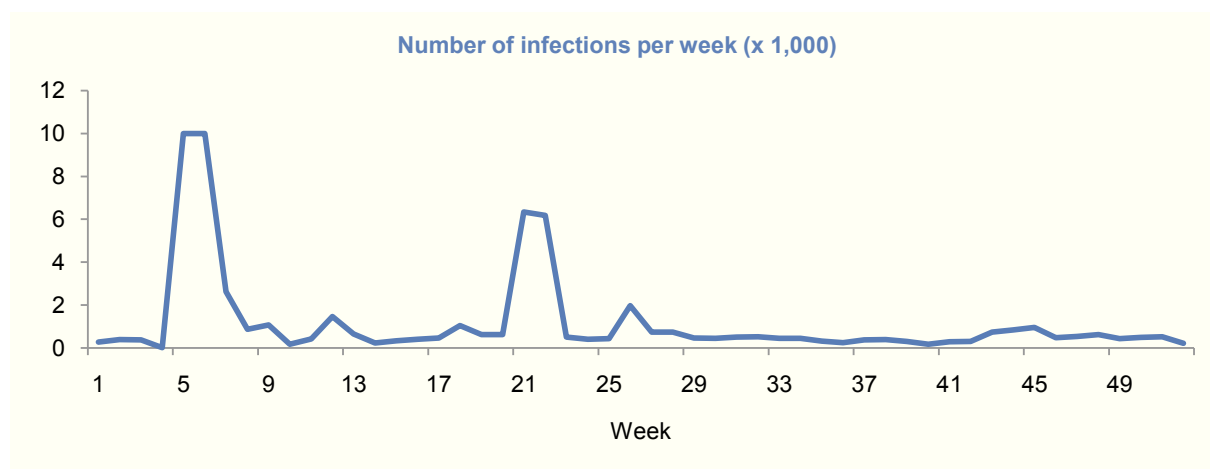
<sup>10</sup> MessageLabs Intelligence 2010 Annual Security Report, <[www.messagelabs.com/resources/press/64370](http://www.messagelabs.com/resources/press/64370)>.

Continent	Share of spam (%) in 2010	Share of spam (%) in 2009
Europe	39.3	25.4
Asia	33.9	33.3
South America	13.4	19.3
North America	9.5	19.2
Africa	3.2	2.1
Oceania	0.7	0.6

Another element is the language used by spammers. By far most of the spam (approx 90%) sent out globally is prepared in English. Interestingly enough, Dutch is in second place at approx 1.3%.

### Malware

OPTA collects data about malware hosted in the Netherlands and malware that makes contact with servers in the Netherlands. Malware is the collective name for malicious and/or harmful software. The unique variants of malware detected by OPTA in 2010 are reflected in the graph below.



This really only provides insight into a small portion of the total volume of malware. The peaks in weeks 6/7 and in weeks 21/22 are explained by two Dutch websites that at the time had a large number of malware variants online on their websites.