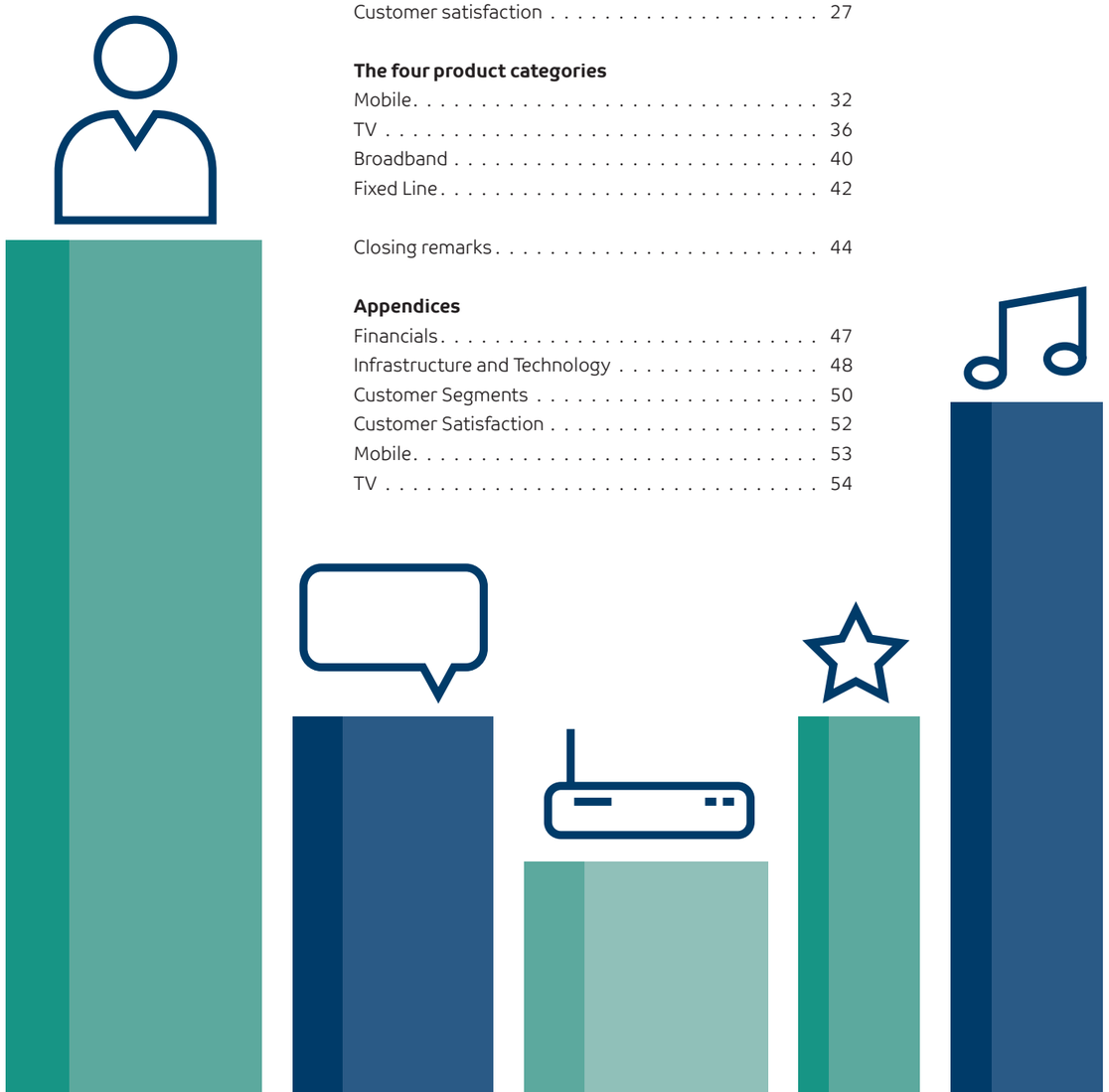
The Case 2016

CBS CASE COMPETITION

TDC Group

Table of Contents



Introduction and case overview

Our world is increasingly digital and every device we own is becoming connected
Today, most of us have access to a level of connectivity that seemed unimaginable only a few decades ago. In a matter of seconds, we are able to reach everyone we know — anywhere, anytime — on devices small enough to fit in our pockets. Our music no longer flows from CDs but from online applications. Our movies are not played back from discs but streamed from the web onto an ever-proliferating variety of devices, and not just the TV. Our photos and videos are not stored on bookshelves, but in the "cloud." With more of our devices becoming connected to the Internet, we are constantly online and demand connectivity around the clock.

Despite ever increasing connectivity, the telco industry is under pressure
The telecommunications (telco) industry provides us with this connectivity: they connect our phone calls, supply our TV signals, ensure our emails arrive at their destinations and allow us to link all our devices. Despite the fact that we are becoming ever more connected, and that demand for connectivity has exploded over the past couple of decades, many of the old telcos have come under intense pressure.

In the 1990s, deregulation swept through the telco industry, which saw long-standing telco monopolies broken up and new competition introduced.
The result was large-scale cross-border consolidation, highly competitive battles for subscribers, and falling prices as new players came into every market. Regulation is still omnipresent both at national levels, and across borders, where the European Union has been introducing stricter price regulation on international calls and roaming.

Established industry incumbents have also had to deal with competition from small, agile startups who often lease access to the incumbents' network at regulated fees, further driving down market prices. Simultaneously, tech companies have become a powerful presence, as the traditional telco industry converges with the technology, media and entertainment industries. So-called "over-the-top" (OTT) players, including Facebook, Apple, and Netflix, provide instant messaging, voice communication, and entertainment platforms over existing networks — all the services that telcos used to offer exclusively.

In Denmark, TDC Group retains a strong position across the telco and entertainment markets
In Denmark, TDC Group is the largest provider of telco and entertainment services. The Group delivers services such as Broadband, Mobile and Fixed Line telephony, as well as home entertainment services including TV and video streaming. TDC Group has a history stretching back 130 years to the first Danish phone lines and is considered Denmark's "incumbent" communications provider. Despite a fiercely competitive market, TDC Group has managed to retain leading market positions across all its core business areas by continually striving to offer better connectivity, better offerings, and a better customer experience. The Group has built and still owns much of Denmark's current communications infrastructure, which delivers connections and content to millions of Danes. In a highly competitive Danish market, TDC Group is the industry's most profitable player and, compared to its European peers, has one of the highest EBITDA margins.

>>

TDC Group consistently presents solid EBITDA margins, but revenue has kept declining
But TDC Group is under pressure. Despite consistent EBITDA margin performance, one core objective has remained elusive: revenue growth. For years, the company has simultaneously lost customers and seen revenue per customer decline, and the share price has lost circa forty percent of its value in the last year. Danes are cancelling their traditional fixed-line phone subscriptions and shifting to mobile instead, where market prices have fallen by as much as seventy percent in the last decade. In the TV market, viewers are opting out of the larger, more expensive channel packages, and an increasing share of customers' viewing time has moved online to streaming services such as HBO and Netflix.

"We need to get our Danish activities in better shape — our current situation is unsustainable. To keep investing in the future development of Danish infrastructure, we need a stable business situation as the foundation."
— Pernille Erenbjerg, Group CEO and President.

TDC Group's position in the Danish market is unmatched, and it has consistently presented positive results in spite of a declining market. But operational improvements can only carry a business so far, and the following vital question remains:

How should TDC Group sustainably improve revenues in its Danish consumer divisions by the end of 2018, while continuously balancing customer satisfaction with commercial viability?

The global telco industry

Digital technology is an ever growing part of our lives. Not only are new technologies proliferating at a rapid rate, but their adaption on the part of consumers, businesses and governments is also happening at an accelerating pace. Throughout the past six years, for example, tablet ownership has grown faster than desktop computers or laptops did when they were launched. Smartphones have swept through markets all around the globe and are no longer viewed as a luxury reserved for the few, but as an essential device for everyday life.

Lately, a new element is becoming increasingly integral to digital technology: connectivity. The term captures the core service provided by the telco industry: connecting people to technology and to each other. This evolution in connectivity has been driven by technology. During the past century, mankind first learned to transmit sound and, later, video, bringing us phones and television. In the 1980s, the Internet was invented, and we became able to transmit any type of data through cables. Today, connectivity is no longer confined to computers or even smartphones, but is also rapidly spreading to cars, washing machines, refrigerators, watches, industrial equipment, and a nearly infinite universe of other machines and appliances — the so-called "Internet of Things."

We have never spent so much time in front of screens — TVs, laptops, smartphones, or tablets — and our data traffic is growing at an increasingly rapid pace across all platforms. In 2014, the total mobile data traffic was higher than the entire Internet traffic in 2008. We may very well be on the brink of a new era in which everything can be accessed everywhere, at any time and across any device. >>

Internet of Things
Devices and machines are connected to each other, making homes programmable and automated.

Cloud computing
Everything is being stored in the cloud.

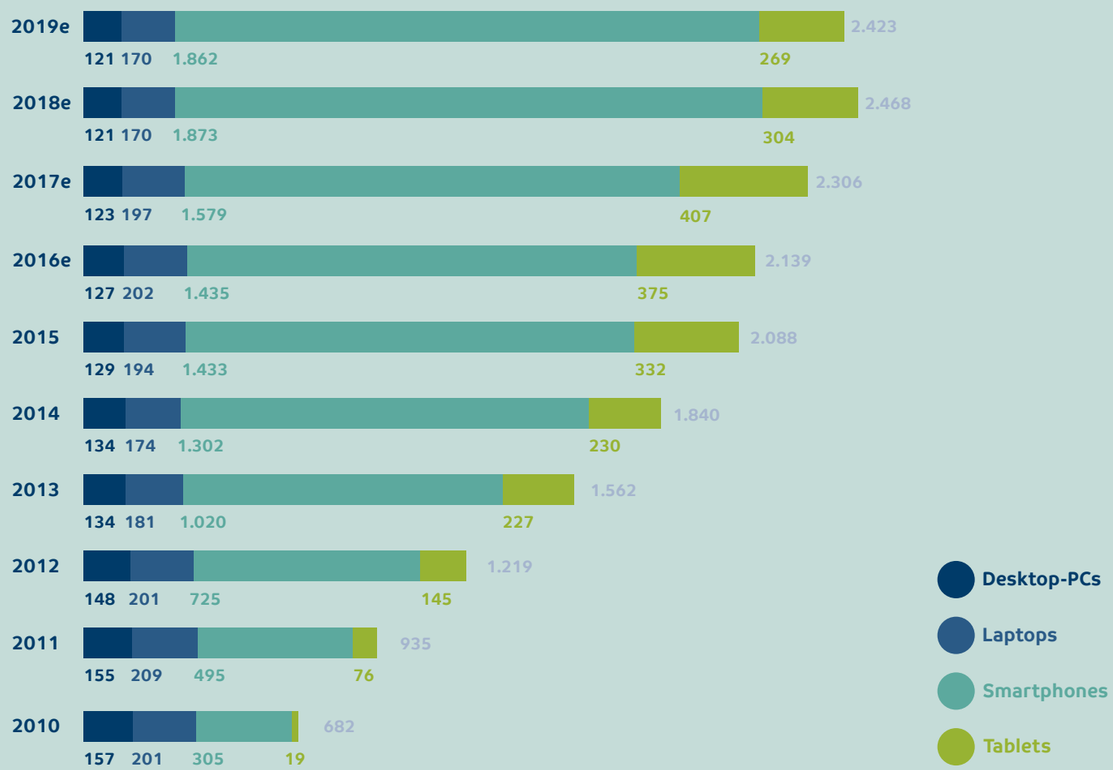
E-commerce
Online shopping is increasing across borders.

Mobile Payment
Phones are becoming means of transferring money and making every day purchases.

Social networks
Social networks are changing the media consumption of consumers.

OTT & On-demand
OTT services are going directly to the consumers giving them on-demand and free services over the top.

Global shipments of Smartphones, Tablets, Laptops and Desktop-PCs (units m)
Source: Statista 2016



<<

Connectivity and the telco industry

At the center of connectivity is the telco industry, which provides us with services such as Mobile and Fixed Line phone connections, Broadband and TV. The communications industry basically consists of two elements: infrastructure and services. Providing the foundation for connectivity, telco companies raise mobile masts, dig cables into the ground and pull lines through our homes. On top of that, they provide many of the services we use these connections for. We rely on them to connect our phone calls, provide access to TV channels, and process our data traffic. Further, many telcos are supplementing their core services by offering entertainment options such as video, TV, music streaming, and more.

Balancing the challenges of offering both the infrastructure and the services that leverage these networks is no easy task. Building, maintaining, and expanding infrastructure is inherently a long-term effort involving substantial investments with horizons of up to twenty years. Meanwhile, the market for services is constantly evolving, as changing consumer preferences, media landscapes, and technology platforms force telcos and other communications companies to constantly adapt their propositions and find new solutions to customer demands.

Pressure on the telco industry

Despite their pivotal role in the digitalization of society, and our increasing utilization of technology and consumption of digital entertainment, the telco industry has never been under greater pressure. Two shifts, in particular, have shaken up the industry in the past decades and continue to do so.

The first major shift occured in the early nineties when national deregulation set the scene for a new and dramatically more competitive environment. Particularly across the EU, state telecom monopolies were privatized as government ownership was dramatically reduced or eliminated altogether and ownership passed into the hands of market investors. Simultaneously, market access was eased for new, often aggressive, competitors to offer the types of communications services that had historically been dominated by the incumbents. Mobile Virtual Network Operators (MVNO) — companies that lease access to incumbents' wireless infrastructure at regulated wholesale prices — entered the market with no-frills subscriptions and intensely pressured existing market pricing levels. All across the industry, prices have dramatically fallen from the levels that existed before incumbents were privatized and markets deregulated.

The second major (and more recent) shift, has been the rise of "OTT" (over-the-top) services. This phenomenon derives from a technology-enabled decoupling of infrastructure and services, implying that every type of service telcos offer can also be delivered online. This has prompted competition from technology firms that provide voice, messaging, music, and video content at a fraction of the price online. Consumers are getting used to the ease and on-demand nature of such services. For example, TV series used to be broadcast at a specific time, but today, most can be streamed whenever it suits the viewer and watched on whatever device is the most convenient. Not surprisingly, these OTT players are increasingly gaining momentum. In 2014, more than half of all worldwide data traffic came from video streaming via OTT services such as YouTube and Netflix, and today more messages are delivered globally through WhatsApp than through SMS.

As a consequence, incumbent telcos all over the world are searching for ways to stay on top of constantly changing consumer patterns and evolving technological possibilities, to find new sources of revenues without losing focus on their classic services, from which they still generate most of their income.

Voice	skype			Viber
Messaging	WhatsApp			iMessage
Music Streaming	Spotify	TIDAL		YouTube
Video Streaming	DR	NETFLIX	HBO	TV2/PLAY

Examples of OTT services entering traditional telco and communication provider industry Source: CBS Case Competition

The Danish landscape

The Danish telco industry is among the most competitive in the world. In this small, densely populated country of a little more than five million people, competition has rapidly intensified in recent decades. Even though Denmark is among the richest countries in the world, a typical Danish mobile subscription costs about a fifth of the price for a subscription in the US, and about half of the price in the UK.

No less than three foreign telcos have entered Denmark since the market was deregulated in the 1990s, typically offering Mobile and Fixed Line services but also expanding into Broadband and TV. Furthermore, a number of Utilities (typically power companies) have also been building out their own network infrastructure.

Since telco is an industry in which there are large benefits from economies of scale, market challengers have sought to aggressively lower their prices in order to win more customers and spread their fixed costs over a larger subscriber base. However, apart from TDC Group, none of the foreign market entrants are generating any significant profits due to the fierce price competition.

"In three years, the total value of the Danish telco market has decreased by approximately 20 percent."

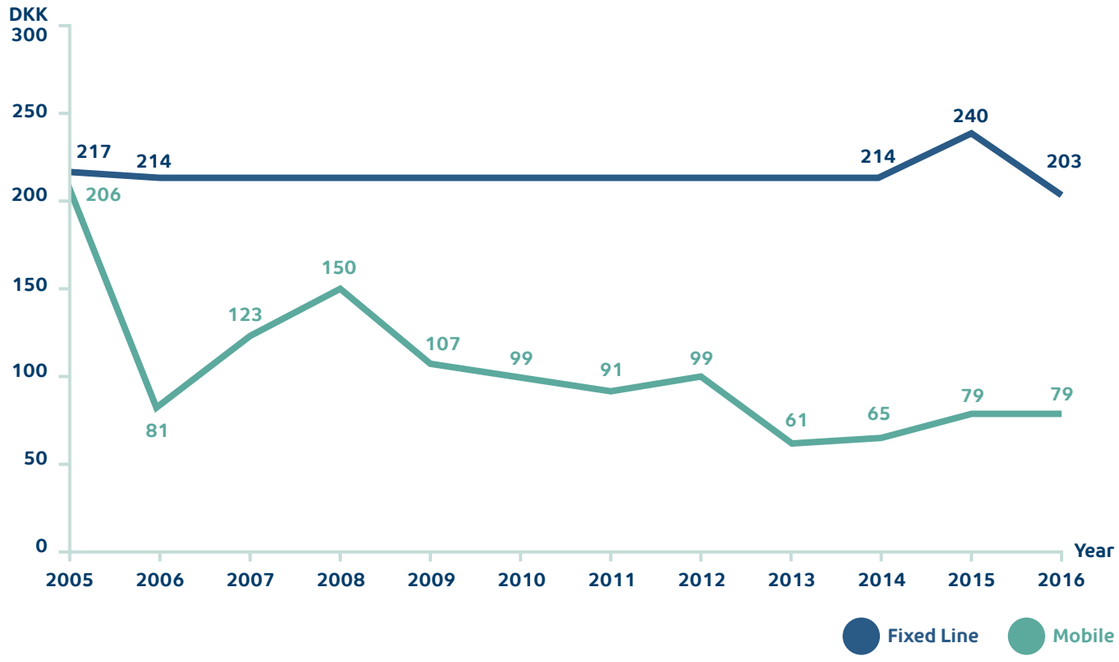
— Pernille Erenbjerg, Group CEO and President.

Foreign operators have not been the only players to introduce new competition into the Danish communications market. Between 2000 and 2010, a large number of Mobile Virtual Network Operators (MVNOs) were created to offer cheap Mobile services to danes. The MVNOs leased network infrastructure from existing operators rather than building their own. They entered the mobile market with heavy marketing and aggressive call center campaigns, offering no-frills subscriptions at previously unseen, low prices. The downward pressure they exerted on prices pushed down the value of the mobile market, and has continued until today, although most of the MVNOs have been acquired by the traditional telcos. This pattern of fierce price competition is not confined to the mobile sector, but is starting to show in the Broadband market as well, after regulators have lowered wholesale prices for players renting network access from established players.

Competitive pressure in the TV market has increased too. Customer adoption of international OTT services such as Netflix and HBO, and new OTT services from the largest Danish TV broadcasters (DR and TV2) are changing consumer TV habits and driving "cable shaving" (down-migration to smaller TV packages) and "cable cutting" (cancellation of TV subscriptions). These trends pressure TV providers to respond with more competitive offers, giving customers better value and more flexibility in how they choose to consume their TV programming.

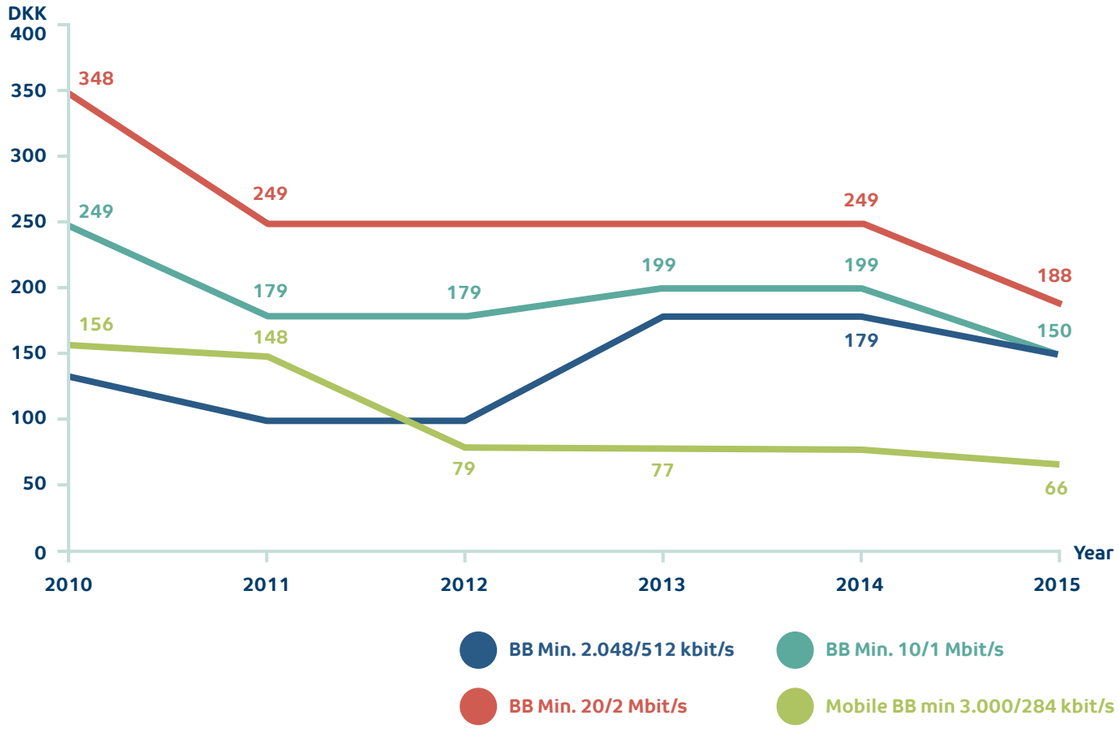
Monthly price of cheapest Mobile and Fixed Line subscription in the Danish market

Source: Telestatistik 2014, 2015



Monthly price of cheapest Broadband subscription in the Danish market

Source: Telestatistik 2014, 2015



	TDC Group	TeliaSonera	Telenor	Hi3G	Utilities (multiple)	Boxer
Description	The oldest and largest company in the Danish market, TDC Group has built out much of Denmark's communications infrastructure, and retains leading positions across all segments. Focused on the Nordics, predominantly in Denmark, Norway and Sweden	TeliaSonera is the result of a merger between the Swedish and Finnish telco incumbents, and entered Denmark in 1995. They are among the ten largest European telcos, with activities in 18 countries including the Baltics and Eurasia	As the Norwegian incumbent, Telenor's Danish presence is the result of acquisitions in the 2000s. It is the largest Nordic telecoms company with activities in Europe and Asian emerging markets	Hi3G, known as '3', entered Denmark in 2003. Its owners are based in Hong Kong. Unlike other operators, Hi3G is focused on mobile services, particularly targeting customers with high data usage requirements. It is also present in a number of other European markets including Sweden	A number of regionally based Danish power companies have installed fiber infrastructure[1] and use it to supply households with broadband or TV, often in common brands. Main players are Stofa (SE), SEAS-NVE, Bredbånd Nord	Boxer is among the largest TV providers in Denmark, and has positioned themselves as an a la carte TV channel provider. They have also expanded to provide broadband
Consumer Revenue in DKK m, '14	11.536	4.900	4.426 (incl. business rev)	928	435	621
EBITDA, '14	7.914[2]	656	646 (incl. business rev)	358	43	12
Products	Mobile, Fixed Line, Broadband and TV	Mobile, Fixed Line, Broadband and TV	Mobile, Fixed Line, and Broadband	Mobile (including mobile broadband)	TV, Broadband and Mobile	TV and Broadband
Brands	YouSee, TDC Brand (now merged in YouSee) Telmore, Fullrate	Telia, Call Me, DLG Tele	Telenor, CBB Mobil, Bibob (merged with CBB)	3, Oister, Zenji Mobile	Stofa, Waoo	Boxer
Network infrastructure	Has own infrastructure in all segments. Rated as world's best mobile network 4G. Offers DSL, cable coax and fiber	Shares mobile infrastructure and backbone network with Telenor	Shares mobile infrastructure with TeliaSonera	Has mobile radio infrastructure, but leases backbone access through other operators	The Utilities hold fiber infrastructure in their respective regions, and lease access to other operators mobile networks when needed	Boxer is transmitting TV through masts to households equipped with antennas. The broadband service is leased via TDC Group's network

[1] A communications infrastructure technology based on fiber-optic cables that transmit signals through light. Enables very high transmission speeds.

[2] Does not include operating expenses captured at the Group level.

A quick introduction to TDC Group

Among the Danish market players, one particular company stands out: TDC Group. It is the oldest, and remains, by far, the largest Danish telecommunications and entertainment provider. The history of TDC Group goes back to the opening of the first phone central in Copenhagen in 1882. Soon afterward, centrals began appearing in other parts of the country, leading to the formation of four different regional telcos, each granted a sole provider license by the state. Over the next century, each of them continued to expand the phone network in their regions, and over the 1980s and 1990s, mobile phone coverage, cable TV, and dial-up Internet connections were gradually added.

Around that time, deregulation of the telco industry was sweeping through Europe. In 1990, the Danish parliament decided to merge the four regional companies to form a Danish player able to compete in international markets: TDC Group (back then known as Tele Danmark). A few years later, the state sold the company, through the world's largest IPO outside a home market at the time. TDC Group then began expanding outside Denmark, while foreign telcos were simultaneously entering Denmark.

In late 2005, five private equity funds joined forces under the banner of Nordic Telephone Company (NTC) to acquire TDC Group. Following the acquisition, the company's strategic focus shifted back toward the Nordics and all of its European subsidiaries were eventually divested. During this period, TDC Group went through an extensive transformation. Through organizational optimization, a shift toward customer focus and the divestment of lower-margin overseas subsidies, the company's EBITDA margin increased dramatically from 29 percent in 2006 to 42 percent in 2014 — the highest among European peers. NTC gradually sold off its shares in TDC Group, and the company returned to being a publicly traded company on the Danish stock exchange.

>>

<<

Following the exit of the private equity funds, TDC Group went through a series of tough years. Since 2013, heavily pressured by aggressive competitors, tighter regulation, and a terminal decline in the number of fixed-line phone subscriptions, it lost market share in three out of its four core product areas.

In January 2016, TDC Group's corporate management team unveiled an updated strategic plan focused on the two measurable goals of providing best-in-class customer satisfaction and improving its cash flow generation within 2018. TDC Group's new strategy promises to deliver better connectivity, better offerings, and better customer experience.

"To realize our goals, we needed to reinvigorate our strategy and intensify our execution focus. Our 2016-2018 strategy is therefore built on the guiding principle of "Always Simpler and Better". It describes what we will strive for, in the way customers interact with us, as well as how we organize ourselves and how we seek to operate as a streamlined business."

— Pernille Erenbjerg, Group CEO and President.

The 2016-2018 strategy has wide implications across the organization. The executive management team has been renewed, the brand portfolio is being simplified through a merger of the two largest brands, and TDC Group will work to significantly simplify its operating model by standardizing internal processes, consolidating IT platforms, and increasingly digitalizing the customer service experience. Moreover, the 2016-2018 strategy sets ambitious targets for upgrading the broadband infrastructure across the country, through a program that will deliver speeds of 1 gigabit per second (Gbps) to 50 percent of Danish households by 2017.

The financial target of the 2016-2018 strategy is simple: to straighten out the previous year's downward-sloping curves and put TDC Group back on a growth track before the end of 2018.

1882

The first phone subscription central in Copenhagen opens and Kjøbenhavns Telefon-Aktieselskab (KTAS) – the roots of TDC Group - is founded.

1950

Danish telecommunications are provided by four regional players

1990

Danish parliament, passes an act to create a parent company of the regional telecommunications companies – Tele Danmark

1994

The world's largest international share issue ever is initiated yielding DKK 18.5bn for Tele Danmark. The issue comprises 40.000 Danish shareholders.

1996

The telecom sector becomes fully liberalized in Denmark.

2000

TeleDanmark changes name to TDC Group.

2005

NTC purchases 87.9 percent of shares in TDC Group. Divestments of European assets follow.

2013

NTC sells off their last shares.

2014

TDC Group and Huawei partner on establishing world class 4G mobile network.

2016

TDC Group merges their TDC and YouSee brands, and partner with Huawei to roll out 1.000 Mbps broadband.

The setup today

Today, TDC Group operates in Denmark, Norway, and Sweden, and has more than seven million subscribers across its four core product areas: Mobile services, Fixed-Line, TV and Broadband. In addition, the company has a strong focus on offering the best on-demand home entertainment and value-added services. Every day, more than eight thousand employees go to work at TDC Group, helping to connect people with technology, unite friends and families, and create new opportunities for businesses. Simply put, their ambition is to provide leading communications and home entertainment solutions in TDC Group's core markets.

TDC Group is organized into five different commercial divisions and four group functions. The commercial divisions cover YouSee[3], Online Brands and Business, as well as all operations in Sweden and Norway (including the TV and Broadband operator, Get, acquired in 2014). The Business Division offers integrated products and solutions to all businesses from the smallest startup to the Danish public sector and large multinational enterprises, while Danish consumers are served by the YouSee Brand and Online Brands (see next pages). Together, the Danish consumer divisions generate close to half of the total revenues.

The Operations function builds and upgrades Denmark's network infrastructure while improving TDC Group's productivity across the entire organization with a strong digital agenda. TDC Group's Chief Customer Officer has the overall responsibility for customer relations, while the Group Chief Strategy Officer focuses on the overall commercial and portfolio management (e.g. pricing and content).

In recent years, the consumer divisions have been under pressure due to a declining overall market and price-driven competition for new customers. Improving the revenue performance in the two Danish consumer divisions will therefore be a vital part of fulfilling TDC Group's goal of getting back on a growth track by 2018. >>

[3]Covering the TDC Brand and the YouSee Brand until June 30 2016, where it will be merged under the YouSee Brand.

Pernille Erenbjerg
CEO

TDC Group Organization

Stig Pastwa
Group Finance
(June 1st, 2016)

Louise Knauer
Group Strategy & Portfolio Mgmt.

Jens Aaløse
CCO & Stakeholder relations

Peter Trier Schleidt
Operations

René Brøchner
YouSee
(Int.)

Michael Moyell Juul
Online brands

Marina Lønning
Business
(April 1st, 2016)

Gunnar Evensen
Norway

Erik Heilborn
Sweden

youSee
TDC

On the consumer markets, the TDC Brand will be fully merged with the YouSee Brand beforeJune 30 2016.

TELMORE
FULLRATE
FULLRATE Erhverv
BLOCKBUSTER

TDC Erhverv
TDC Wholesale
TDC Hosting

TDC
Get

TDC

<<

Differentiating TDC Group in a price-sensitive market

As the telco incumbent, TDC Group is legally obliged to provide competitors with access to their fixed infrastructure, at a wholesale price set by the Danish Business Authority. This roughly implies that it is difficult to make a market price markup based on speed, stability and connectivity, as all competitors have access to the same infrastructure. Instead, TDC Group continuously focuses on pushing the competitive element away from price, and toward better customer experiences, value added services and integrated communications and entertainment offerings. In addition, due to its size in the Danish market, TDC Group is able to negotiate entertainment content agreements at more favorable terms than its competitors, which constitutes a key competitive advantage.

Customer focus, cross-selling and churn

As for any incumbent telecommunications and entertainment provider, one of the key priorities for TDC Group is to keep churn (the cancellation of a customer subscription) low. Even relatively small changes in churn levels have a significant impact on the bottom line. In addition, adding new customers can be quite expensive, both in the TV and Broadband markets, due to cabling, installation, and modems, but also in the mobile sector where telcos often have to partially subsidize phone sales to acquire new customers.

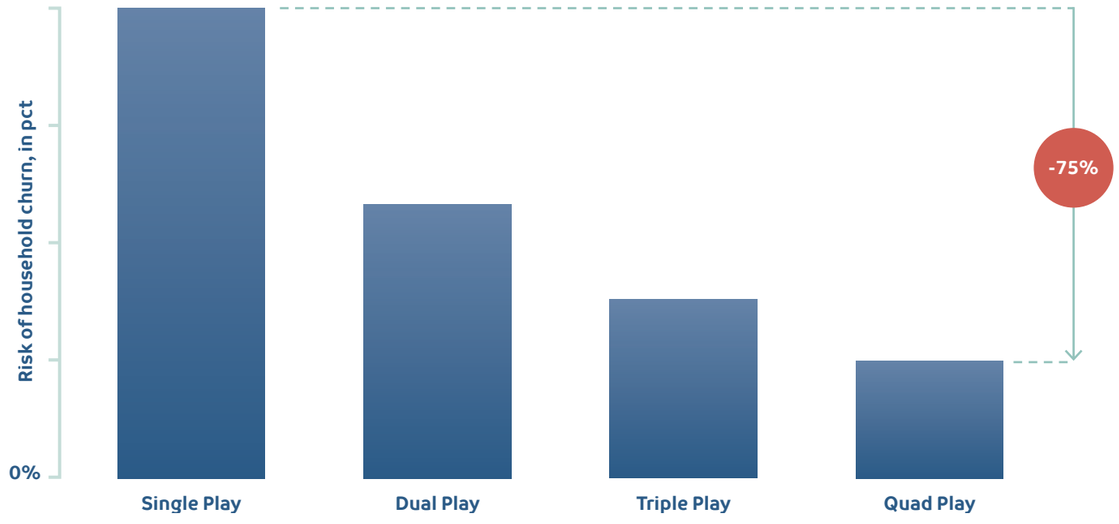
Equally important is a strong focus on providing each customer with an integrated selection of products and services. Cross-selling different products to the same customer has an immediate impact both in increasing average revenue per user (ARPU) and reducing the risk of churn. The same pattern holds for providing users with better entertainment and value-added services.

"If you move a customer from having only a mobile subscription to also having broadband and TV, his churn probability decreases by more than 25 percent. If you add a music subscription on top of that, the churn rate decreases by another 25 percent."

— Michael Moyell Juul, SEVP, Online Brands.

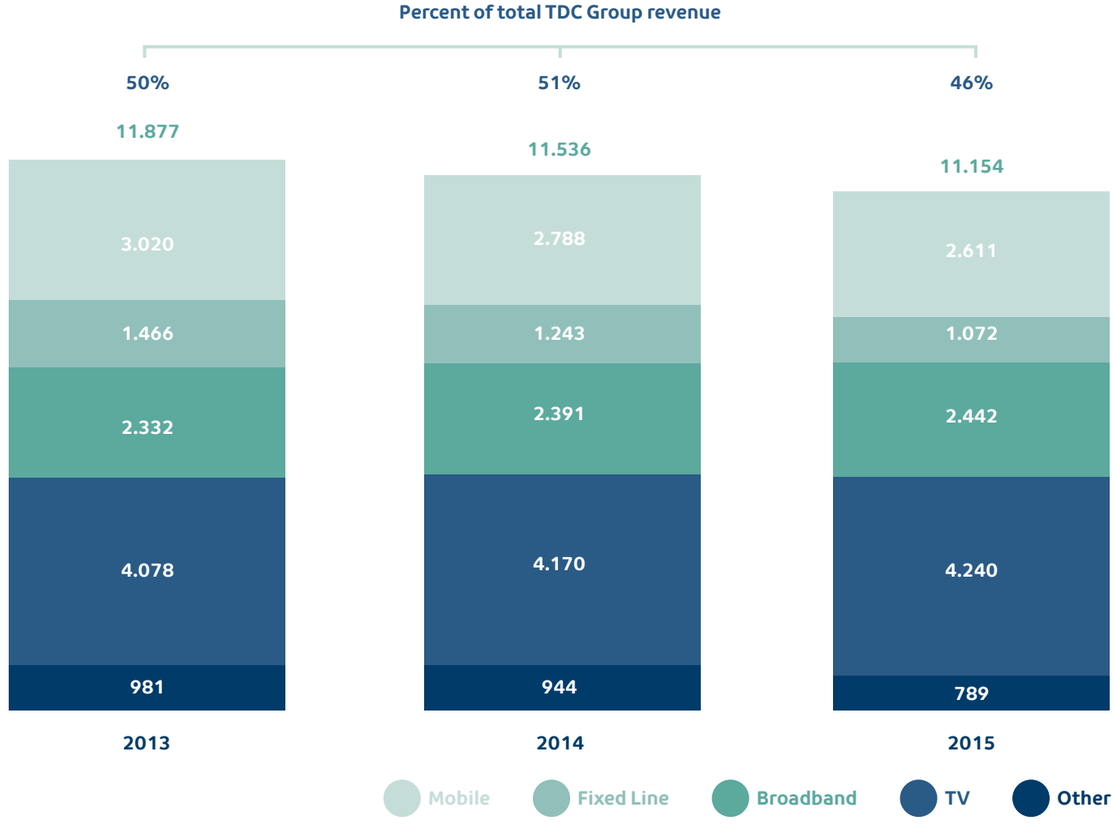
Average household churn, by number of main products in household

Disclaimer: An example of a Churn profile of a brand Source: TDC Group



Consumer revenue split on products (DKKm)

Source: TDC Group



Brands

TDC Group covers the Danish consumer market with several different telco brands, each with its own profile and target segment. With the 2016-2018 strategy, the previous consumer division has been split into two business lines: YouSee (consisting of the YouSee brand and the TDC brand which are currently being merged) and Online Brands (Fullrate and Telmore). The oldest consumer brand, TDC — carrying the name of the group — will be phased out for consumers before July 1, 2016, with customers being migrated to YouSee.

"The splitting of the Danish consumer group into two new business lines is made to sharpen our focus, and move closer to our customers — both in terms of product development and service levels."
— Pernille Erenbjerg, Group CEO and President.

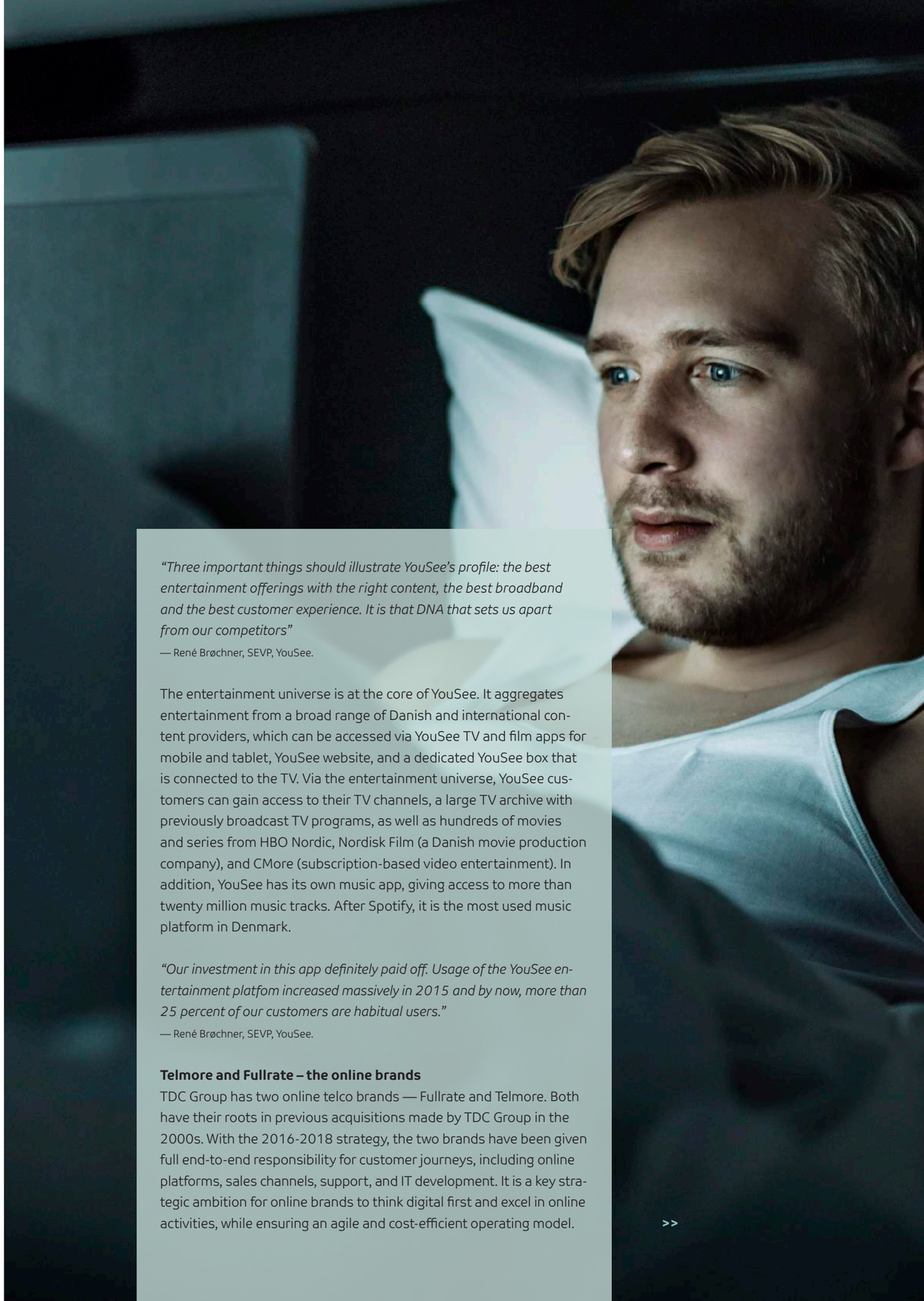
The YouSee brand has its roots as a supplier of cable TV and entertainment, and did not add Broadband and Mobile until more recently. On the other hand, the TDC brand, which is now being merged with YouSee, started with Fixed Line, then added Mobile and Broadband, and later TV. The TDC brand has a stronger reputation as a 'telco' brand, whereas YouSee is more closely associated with entertainment. By merging the TDC brand into YouSee, TDC Group underlines the transformation from provider of telco to entertainment. Over the next six months, it will be vital for the company to find the best possible way of migrating customers from the TDC brand to YouSee, while minimizing the risk of customer churn.

YouSee – the household brand
YouSee will continue to be a full-service communication and entertainment provider, covering all of TDC Group's product categories, as well as providing access to a massive digital entertainment universe, available across all devices. YouSee's core customer segment is families, and a main strategic objective is to increase the number of household customers with a full product holding through strong integrated household solutions and cross-sales.

This is reflected in the product portfolio: customers that group their TV, Mobile and Broadband with YouSee get 20 gigabytes (GB) mobile data included on top of their plans. Additionally, families are offered a discount on multiple mobile subscriptions.

"We are targeting families as a segment. They are loyal customers who value bundled, integrated entertainment offerings that give access to content across all devices all the time. We are constantly focused on offering what families will value the most."
— René Brøchner, SEVP, YouSee.

Basic subscriptions are priced in the high end of the market, but YouSee offers a broad range of value-added services on top of the basic telco offering to give customers more value for money. YouSee goes to the market through its website, call centers and more than 45 brand stores (currently, the stores are TDC-branded, but will be changed to YouSee before the summer of 2016).



"Three important things should illustrate YouSee's profile: the best entertainment offerings with the right content, the best broadband and the best customer experience. It is that DNA that sets us apart from our competitors"
— René Brøchner, SEVP, YouSee.

The entertainment universe is at the core of YouSee. It aggregates entertainment from a broad range of Danish and international content providers, which can be accessed via YouSee TV and film apps for mobile and tablet, YouSee website, and a dedicated YouSee box that is connected to the TV. Via the entertainment universe, YouSee customers can gain access to their TV channels, a large TV archive with previously broadcast TV programs, as well as hundreds of movies and series from HBO Nordic, Nordisk Film (a Danish movie production company), and CMore (subscription-based video entertainment). In addition, YouSee has its own music app, giving access to more than twenty million music tracks. After Spotify, it is the most used music platform in Denmark.

"Our investment in this app definitely paid off. Usage of the YouSee entertainment platfom increased massively in 2015 and by now, more than 25 percent of our customers are habitual users."
— René Brøchner, SEVP, YouSee.

Telmore and Fullrate – the online brands
TDC Group has two online telco brands — Fullrate and Telmore. Both have their roots in previous acquisitions made by TDC Group in the 2000s. With the 2016-2018 strategy, the two brands have been given full end-to-end responsibility for customer journeys, including online platforms, sales channels, support, and IT development. It is a key strategic ambition for online brands to think digital first and excel in online activities, while ensuring an agile and cost-efficient operating model.

>>

<<

Both brands have lower price points than their YouSee counterpart, but offer fewer added benefits. Neither Telmore nor Fullrate are price leading, but are typically priced at par with, or just above, CBB and CallMe (Telenor's and Telia's low-priced brands, respectively).

"With the reorganization, we wanted to bring Telmore and Fullrate back to their online roots — they should not be traditional telcos."
— Michael Moyell Juul, SEVP, Online Brands.

Fullrate targets the most price-conscious consumers, and offers Broadband, Mobile, TV, and Fixed Line services. All offerings are "no-frills" products, without any of the free value-added services that YouSee offers — instead some of these services can be bought in addition to the basic products.

Telmore, on the other hand, is targeting the modern and urban segment of the population with mobile-only solutions. It has its own music platform — Telmore Music — that is essentially similar to the YouSee and TDC Group-branded music platforms. In addition, subscribers can buy access to "Telmore Play," which bundles a range of third-party entertainment offerings with a mobile subscription. With Telmore Play, customers are given login access to a number of SVoDs (Subscription Video on Demand), such as HBO Nordic, TV2 Play, and C-More, an e-book service, and digital versions of popular magazines and newspapers.

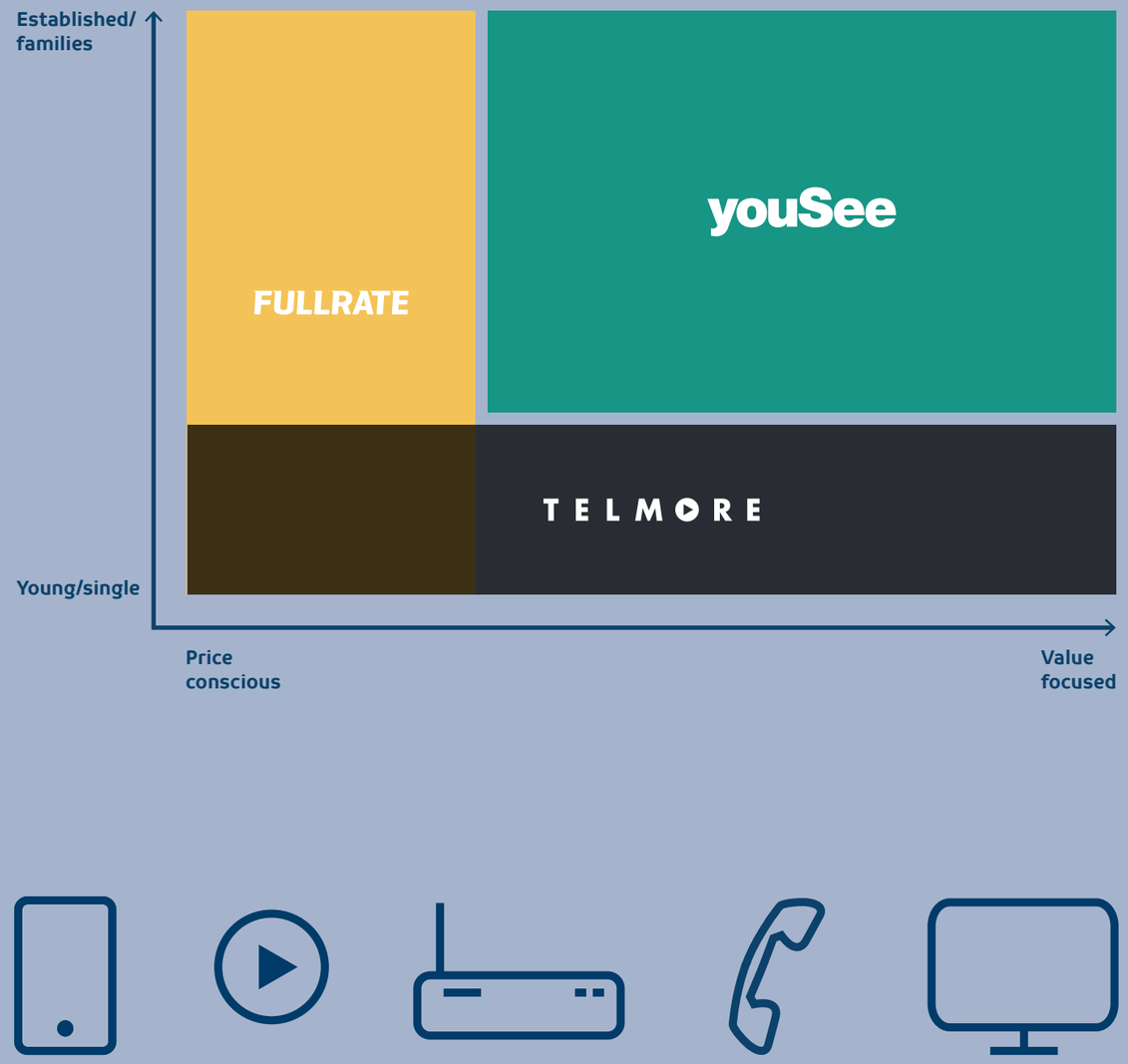
Blockbuster

After the global movie rental chain, Blockbuster, closed its stores in Denmark, TDC Group licensed the brand, and relaunched it as an online OTT-service offering movie rentals to all Danes. At blockbuster.dk, customers can rent and purchase the newest premiere movies and series or discover old movie classics in its large catalog of more than 6.000 titles. Leveraging deals with the movie and cinema industries, Blockbuster offers new movies only weeks after they are no longer showing in movie theaters. Blockbuster is available on all major OTT platforms, including website, mobile and tablet apps, and leading Smart TVs and playing consoles. TDC Group is working to leverage the existing customer base and the well-known brand to capture a significant part of the growing market for online movie rentals.

"Blockbuster has already added 200.000 registered users: we believe we have something the customers want."
— Michael Moyell Juul, SEVP, Online Brands.

Consumer Brand's positions by target segment

Source: TDC Group



Customer satisfaction

"Our focus on customer experience is not just to be nice. The foundation for any healthy business is satisfied customers. It brings lower churn, and more profitability."

— Pernille Erenbjerg, Group CEO and President.

Focusing on customer satisfaction has been a top priority for TDC Group for many years, with several improvement programs running since 2009. The programs have focused on, for example, reducing unacceptable customer experiences, shortening customer service waiting time, and ensuring a simple and smooth customer interaction. However, the numbers show that TDC Group is still far from having the happiest customers in the industry. While the two online brands (Telmore and Fullrate) are doing quite well, YouSee (and the former TDC brand) are lacking behind competitors. With the 2016-2018 strategy, TDC Group has set itself the ambitious objectives of becoming fully customer-centric and taking customer satisfaction to a new level. A new position of Chief Customer Officer has been added to the core management team, to ensure customer satisfaction remains the top priority across TDC Group's brands.

"The need to focus on customer satisfaction has increased over the last ten years, as the telco market has matured and growth has stagnated. Historically, a telco could do fine with the growth coming from the spread of Mobile and Broadband. Today, it's all about retaining customers and potentially upsell."

— Jens Aaløse, SEVP and Chief Customer Officer.

Price and quality are driving recommendation scores

To measure customer satisfaction, TDC Group focuses particularly on whether a customer would recommend TDC Group to others. This is driven by two elements: price and quality. TDC Group has long focused on not being price leaders, but rather adding more and better value-added services and entertainment as part of the subscriptions.

>>

<<

"When telco is perceived only as a commodity, which it used to be — and to some customers still is — we need to differentiate, in order to compete as premium brand. With our entertainment and TV side, we get products that are much more high-involvement. Our brands are more suited for this kind of competition."

— Lise Bering Søby, SVP, Customer Experience Transformation.

The perception of quality is shaped by the overall customer experience. This includes all touchpoints with the customer and the usage of products and services. Examples of drivers include helpful and available customer service across all channels (call centers, online, and retail), fast replies, recognition of customer loyalty, and flawless connection. Sometimes, good customer experiences can come from small initiatives. In the summer of 2015, after a two-day breakdown of TV connections, the responsible manager from TDC Group apologized through a video on Facebook, and released two free premiere movies.

"Our aim is simple: we want to have the best customer satisfaction."

— Jens Aaløse, SEVP and Chief Customer Officer.

Being the incumbent is an extra burden on perceptions

In addition to price and quality, the role of being the incumbent seems to influence the customer satisfaction. In Denmark, TDC Group has lower recommendation scores than Telia (the Swedish incumbent). In Sweden, where TDC Group is the market challenger, the roles are reversed. Also, Telmore's customers report much higher satisfaction with their network than TDC Group's customers, although the network is the same.

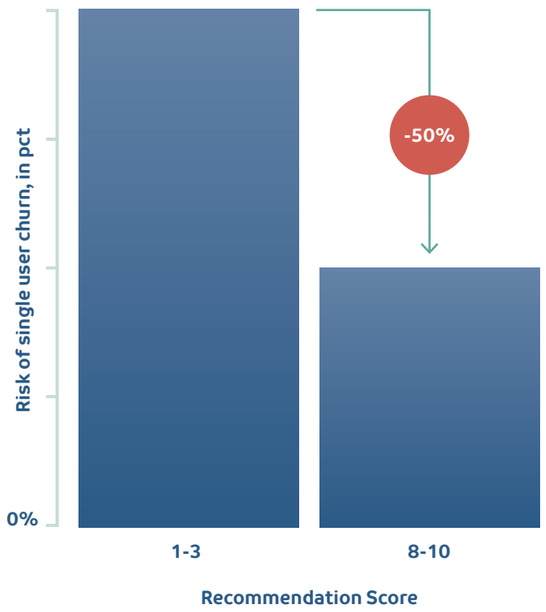
One way in which TDC Group seeks to improve the public's perception is to become better at communicating its corporate social responsibility (CSR) initiatives and societal impact. These range from investments in digital infrastructure and projects promoting sustainable digital culture to social partnerships and specific initiatives, such as donation of SIM-cards to newly arrived refugees.

"Generally, our image is not nearly good enough – and I am quite sad that it's not better. Therefore, we need to make our business model more digital and modern."

— Pernille Erenbjerg, Group CEO and President.

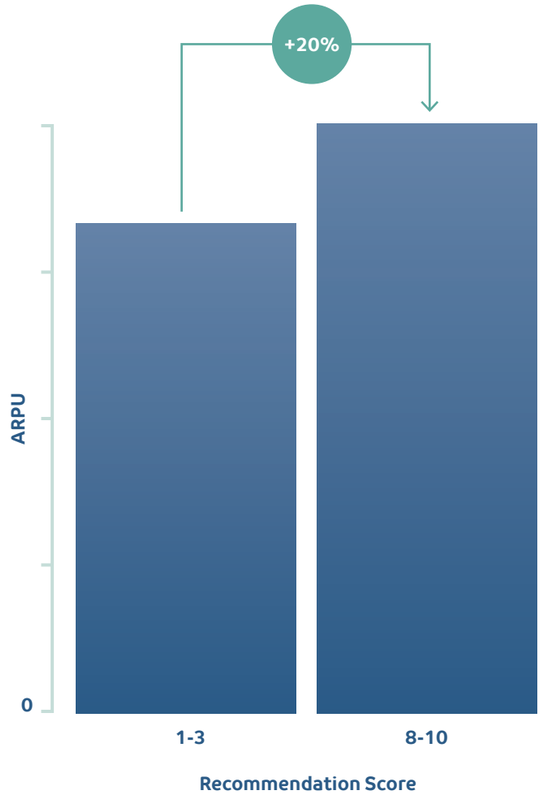
Average risk of single user churn, by user's recommendation score

Source: TDC Group



ARPU, by user's recommendation score

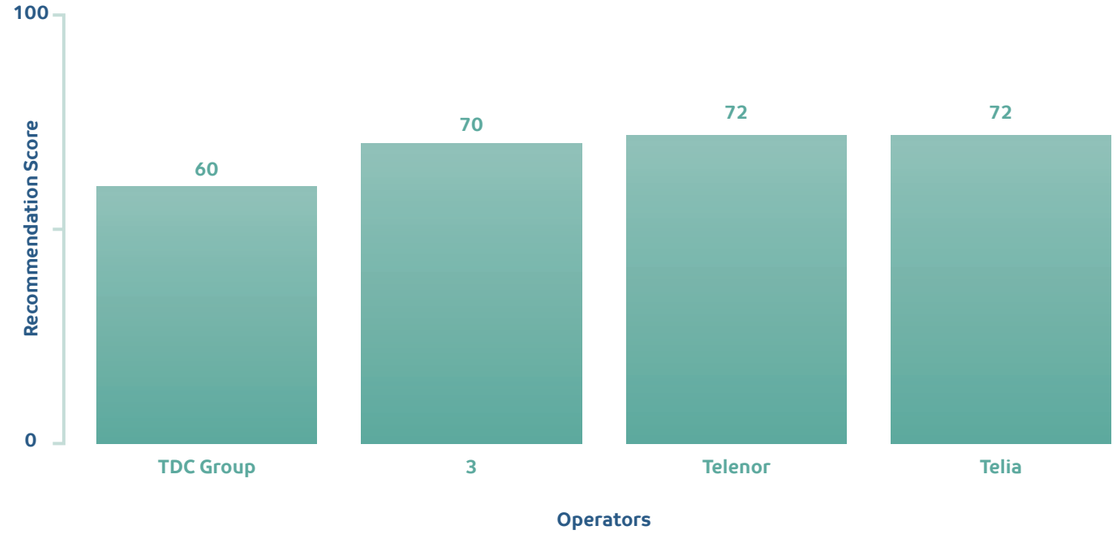
Source: TDC Group



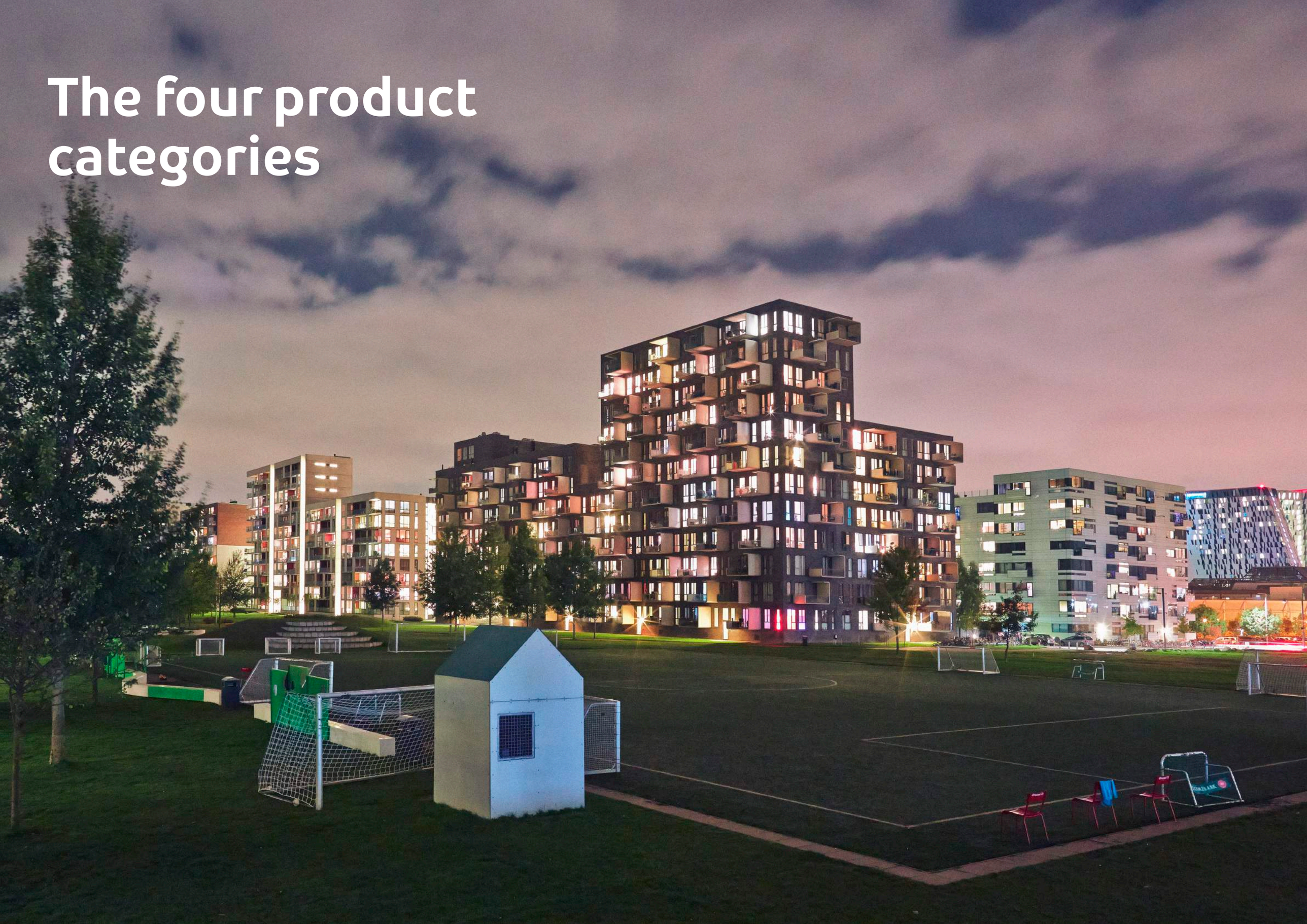
1: not recommended 10: highly recommended

Average recommendation score by operator

Source: TDC Group



The four product categories



Mobile

In Denmark, everyone has a mobile phone, and it is rarely outside of arm's reach. The number of non-business subscriptions in 2014 was at 5,7 million — a slightly bigger figure than the total population, meaning that mobile penetration rate is over 100 percent. Smartphones are becoming standard; approximately two thirds of all mobile phones are smartphones. With smartphones, phones have gone from being used for simple voice calling and messaging to becoming the epicenters of all sorts of everyday activities (e.g., music and video streaming, online purchasing, website browsing). For TDC Group, Mobile is one of its most important markets — it accounts for a quarter of Danish consumer revenue, and each of the four consumer telco brands offer mobile subscriptions.

A mobile subscription typically provides access to calls, messaging (SMS and MMS), mobile data, and potentially a range of value-added services such as music streaming, access to video content, and e-book subscriptions. Voice calls are most often capped by number of hours per month and mobile data usage by gigabytes, while messaging is typically unlimited. For most subscriptions, international calls and roaming (using the mobile phone outside Denmark) comes at an extra cost. EU regulators are gradually requiring operators to phase out roaming rates before 2017, and some operators in Denmark have started offering subscriptions with unlimited international roaming. Mobile phones can be bought with or without plans, but are often sold at a moderate discount if the consumer subscribes to such a plan. About two thirds of mobile phones in TDC Group are sold with a subscription, and many operators offer installment plans that let customers pay off the phone over up to 36 months. However, operators are not allowed to lock in customers for more than six months. Operators typically do not make notable margins from selling phones, but offering a competitive selection of phones is important for customer acquisition. In Denmark, iPhones are particularly popular, and account for more than half of all sold smartphone, implying that market sales are highly driven by new phone releases from Apple.

"Many users change their operator and subscription when they change phones. Being close to the customer during their phone purchase is essential."

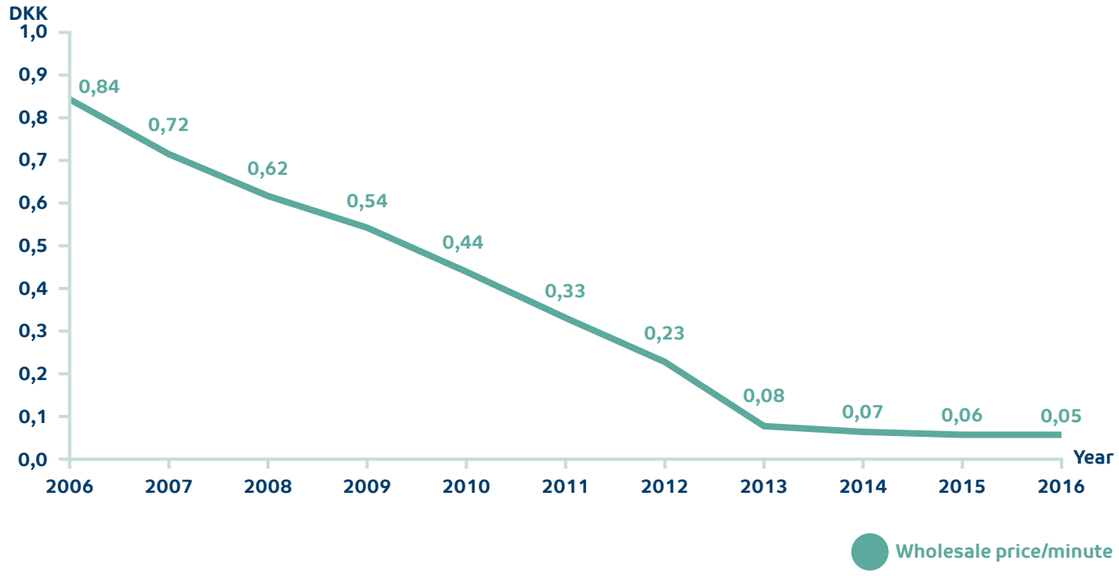
— Jesper Bæk Overgaard, VP, Business Intelligence Competence Centre.

Market dynamics

In Denmark, the Mobile market has seen extremely tough price competition over recent years. In the course of the last decade, prices have fallen by around 70 percent. Simultaneously, the amount of voice, text, and data bundled into subscriptions has gone up: for less than 100 DKK, a user today can subscribe to price plans with 12 GB mobile data, 12 hours of voice per month, and unlimited messaging. As a result, mobile subscribers have benefited from increasing value in their mobile phone packages. Intense competition in the mobile sector is also reflected in costly marketing campaigns, and the industry is one of the most aggressive in buying media space. For some brands annual marketing spend per subscriber is as high as ~300 DKK.

Historical development in wholesale prices on TDC's mobile network

Source: Danish Business Authority



The unusually competitive nature of the Danish mobile market is driven by two core factors. The first of these is the number of operators in the market. No less than four mobile players in Denmark have their own infrastructure, while in Germany and the US, just three operators serve market sizes of 80 million and 300 million, respectively.

"All the operators are fighting to create volume. They have built a network, which is of no need if there are no customers on it. Therefore, they are aggressively targeting new customers to fill up their excess capacity."

— Frederik Sjørslev, SVP, YouSee.

The second factor has been the presence of MVNOs, who have leased access to existing operator's mobile infrastructure. In some cases, competition between the four network owners allowed some MVNOs to access existing infrastructure at wholesale prices, that were below the average costs of network operation for the operators. With infrastructure wholesale prices set lower than the cost of operating them, the MVNOs have been able to afford a disruptive lowering of market prices, in order to win over customers.

"Our competitors are struggling, which leads to unhealthy market dynamics. The collective behavior in the market is simply not sustainable."

— Pernille Erenbjerg, Group CEO and President.

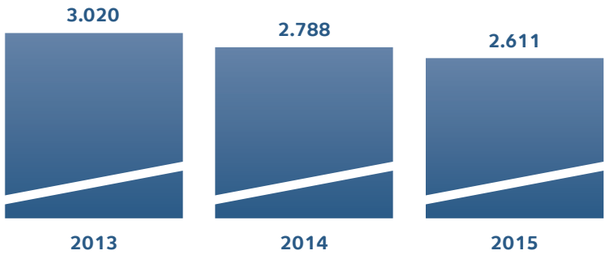
What drives consumers

Danish mobile consumers are generally price sensitive. In combination with easy switching between operators, pricing has been a prime competitive element. In line with the general strategy, TDC Group has not tried to be market leaders in pricing. One area where TDC Group differentiates is in entertainment. YouSee offers access to the YouSee Entertainment universe, while Telmore offers "Telmore Play". In the fight for customers, there has however been a robust tendency for value-added services to converge into commoditized default elements: previous add-on services such as >>

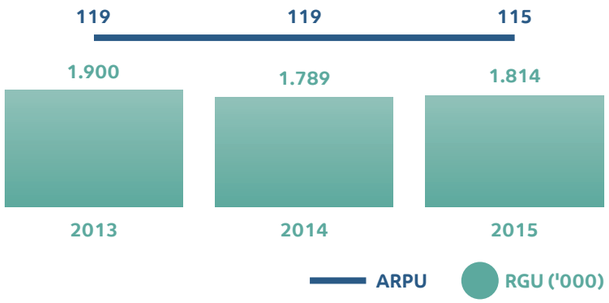
Mobile Consumer Market

Source: TDC Group

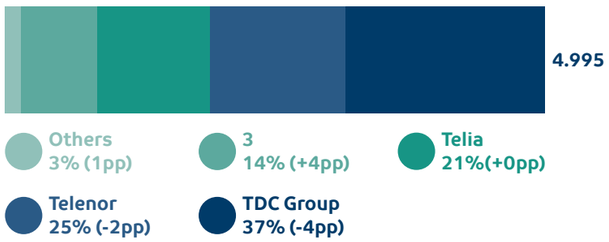
Revenue (DKKm)



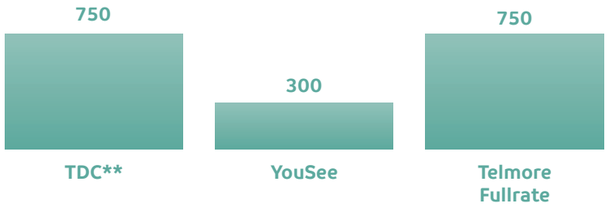
ARPU & RGU development



Market share RGU ('000). (change in pp. from 2013-2015)



Approximate 2015 RGU by Brands ('000)*



*Adjusted figures – for case purpose only

**To be merged with the YouSee Brand by June 30 2016

<<

unlimited messaging, capped usage rather than pay-as-you-go, and access to 4G are all standard today. Likewise, some elements that are seen as value-adds today — e.g., music subscriptions or free international roaming — may be going the same way, which means it is important for TDC Group to continuously explore new ways of providing better customer experiences and value-added services.

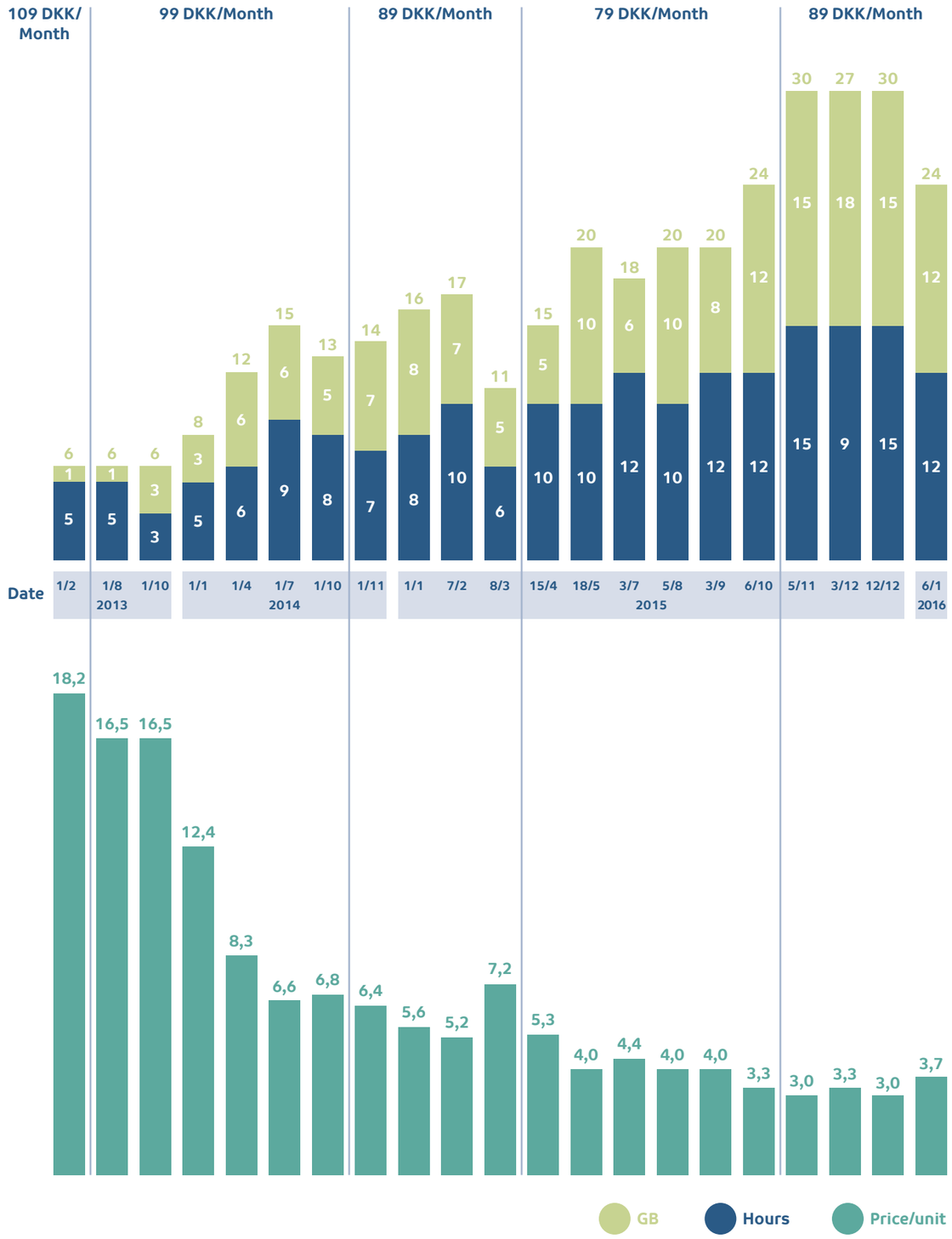
Lately, in the end of 2015 and beginning of 2016, there have been signs of prices rising in the market. All operators in the market, except "3", have raised their cheapest package prices for new customers by at least 10 DKK for the online brands, and 30 DKK for the premium brands.

Another important competitive parameter is network coverage and speed. Customers are using their phones for ever more purposes, and video consumption in particular is driving up data consumption. Each of the mobile network operators has 4G mobile networks, but real-world coverage and speeds do differ by operator (see next page).

Nevertheless, there is little monetization over connectivity differences (e.g., add-on pricing for 4G access). This could be an opportunity for TDC Group. After finishing a network upgrade in 2015, which has been officially evaluated as the fastest network in Denmark by The Danish Institute for Technology, it is vital to find the best ways of leveraging higher speed and capacity, both in terms of building more traffic and in terms of marketing. Despite the recent test results, competitors are still communicating claims about superior networks, and it can be difficult for consumers to tell the difference.

Cheapest Mobile subscription in the Danish consumer market

Source: TDC Group



TV

Television is at the center part of most living rooms in Denmark. More than 95 percent of all households have at least one TV, and the average daily viewing time is more than three hours per person. TV keeps people updated and entertained, through news, movies, sports, and TV shows. But the landscape and consumption patterns are changing — consumer preferences, value chains, and technological possibilities are all undergoing fundamental change, both challenging the telcos and offering them new opportunities.

For TDC Group, TV is the core part of the group's shift from a classic telco toward an entertainment provider, and brings in more than a third of total consumer revenue. TV is also where the group size comes into play as a competitive cost advantage — being able to reach millions of households brings the ability to negotiate favorable costs from broadcasters, who need to show their commercials to the largest possible audience.

Market offering

TV products are usually purchased as one of two models; a bundle package or a "pick and choose" model. YouSee offers bundle packages, and allow users to choose between three packages of TV channels: basic, medium and full, each containing more channels than the prior. The "pick and choose" option allows consumers to select their desired channels on top of a basic package. When purchasing TV, consumers are automatically granted access to watch their TV channels and past TV programs via the YouSee Film & TV apps and website — the entertainment universe. Fullrate, being the no-frills brand, is much simpler in its offering, where only two packages are available. In general, it's hard to differentiate on channel packages, as every operator essentially offers the same channels.

Customers in the Danish market either buy TV subscriptions individually (I-customers) or through organized housing or antenna unions (O-customers) in which the unions negotiate and procure TV on behalf of the individual households. The O-customers vary in size from a dozen households to the largest, which comprise more than 65.000 households in one organization. There are about 2,8 million households in Denmark, of which 1,1 million households are a part of a TV union.

Changing consumption patterns

Today, every screen is a TV. Smartphones and tablets are becoming increasingly important for TV viewers, who want the same viewing experience wherever they are. Consumers want on-demand TV, with the ability to pause or reverse live broadcasts, as well as freely choose between past shows. Whereas Flow-TV is slightly declining, on-demand TV is on the rise, and TDC Group estimates that it will constitue half of all viewing time by 2020. However, for many viewers, the actuality of Flow-TV (news, sports, and national live TV shows such as X-Factor) remains important. At the same time every screen is becoming a TV, every device is becoming a TV box. With technologies such as smart TVs, Airplay, and Chromecast, any video on a smartphone, computer, or tablet can be easily projected to the big TV screen.

"We used to have very few alternatives to our TV offering. Today, due to, among other things, increasing bandwidth, a myriad of alternatives has appeared. Changing customer preferences challenge our agility, as we need to stay relevant for a much more complex set of user preferences."

— Christian Phillip Morgan, VP, Content.

"We're very eager to find ways to become more relevant for the young, digital natives, whether it means changing platforms, content, or perhaps payment model."

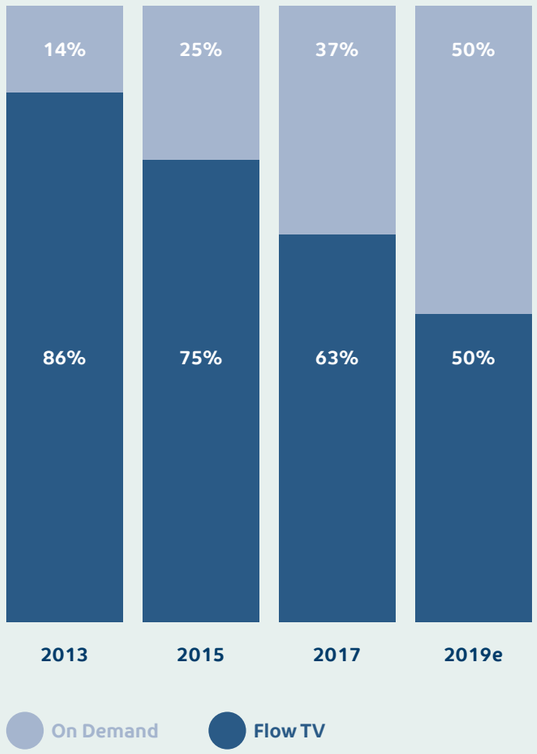
— Christian Phillip Morgan, VP, Content.

For TDC Group, these patterns present a risk that some consumers may opt out of having a TV package altogether, and may settle with broadband only. On the other hand, these technologies also open a new possibility to supply TV via broadband to consumers otherwise not in TDC Group brands.

>>

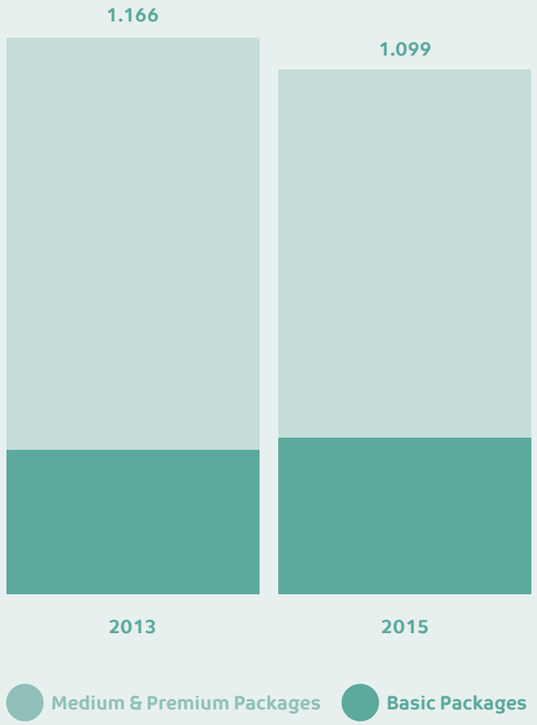
Viewing time in pct. of total viewing time

Source: TDC Group



YouSee TV package subscribers ('000)

Source: TDC Group



<<

Shifts in the value chain

The traditional TV value chain is changing. Historically, broadcasters would purchase and/or produce TV content that they would broadcast through their TV channels. The broadcasters would license their TV channels to TV distributors (e.g., Viasat or YouSee) who would bundle the TV channels into different TV packages. Finally, the TV distributors would sell the TV packages to consumers and distribute the content via their network infrastructure (e.g., cable or satellite).

Today, players are moving across the value chain and new OTT players have emerged (see TV Appendix). Broadcasters and content producers are skipping TV distributors and delivering their content directly to the consumer via their own OTT platforms. In Denmark, the two dominant broadcasters TV2 and DR (Danmarks Radio), together constituting close to 85 percent of total viewing time, have made their own OTT services apps. The largest Danish film producer, Nordisk Film, has done the same. Simultaneously, OTT companies such as Netflix are not only aggregating movies and series from other producers, and distributing these online, directly to consumers, they are moving back in the value chain and are producing their own exclusive content as well. The combination of free online public service TV and cheap international OTT services presents a clear risk to TDC.

TDC's approach has so far been to focus on aggregating content for customers, with simple and intuitive usage. For YouSee customers, a live-TV functionality is embedded in the YouSee entertainment universe that can be accessed either via a TV box (currently 25 percent of customers have a box, and penetration is expected to double by 2018) or the YouSee app.

"Today, the content and TV landscape has become extremely fragmented and, for many consumers, difficult to navigate. We see a clear role in aggregating compelling content across multiple broadcasters and producers to create one integrated user experience."

— Christian Phillip Morgan, VP, Content.

In some countries, TV distributors have taken new roles instead. In 2013, British Telecom and SKY, two UK telco incumbents, acquired exclusive rights to air Premier League, effectively skipping the broadcasters. Such moves are expensive. In Denmark, exclusive rights to air Premier League or the national Danish Superligaen, would likely amount to 100-300 million DKK annually.

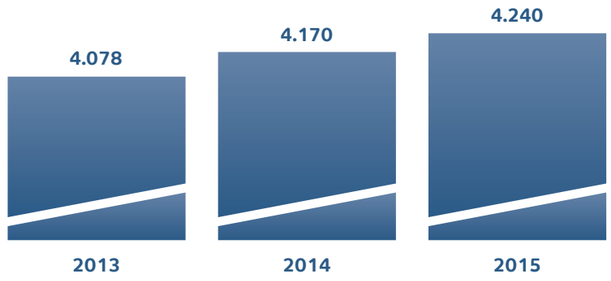
"There are definitely opportunities for TDC to go different ways in the value chain — both upstream, into content ownership and production, and downstream, with more app-based OTT services, where we continue to aggregate content from others."

— Christian Phillip Morgan, VP, Content.

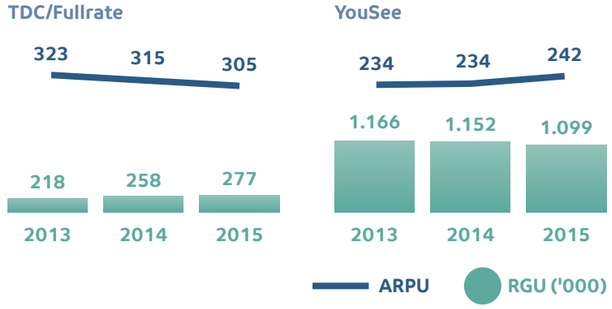
TV Consumer Market

Source: TDC Group

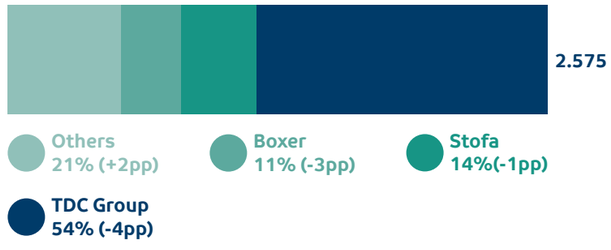
Revenue (DKKm)



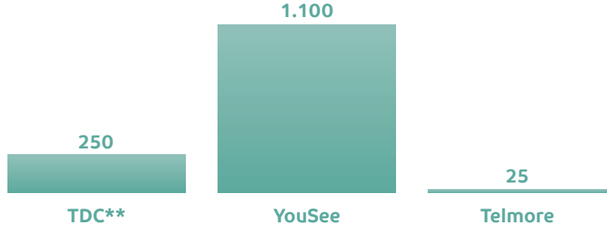
ARPU & RGU development



Market share RGU ('000). (change in pp. from 2013-2015)



Approximate 2015 RGU by Brands ('000)*



*Adjusted figures – for case purpose only

**To be merged with the YouSee Brand by June 30 2016

Broadband

Today, Internet access is virtually indispensable, and has replaced telephone connections as the most important access line for a household. The term Broadband captures any Internet connection to a household, typically based on one of three fixed infrastructure technologies: DSL, fiber and coax (see the appendix on infrastructure). However, mobile broadband is becoming increasingly more important. In Denmark, 82 percent of households have a broadband connection, and the number is steadily growing. The penetration is primarily limited by senior households' lower usage.

"Broadband has become the household lifeline."
— Jens Raith, VP, YouSee Broadband.

Broadband users are demanding higher speeds in their connections. The annual consumer data traffic expands at a rate of 40-50 percent per year. In particular, the growth of video streaming and on-demand TV is pushing data consumption. Today, video streaming accounts for 64 percent of all global Internet traffic. While a connection of 100 megabits per second (Mbps) will be quite sufficient to stream high-definition (HD)-quality movies on several devices at once, more and more customers are choosing to go for the highest available speeds.

1000 Mbps is the speed that people dream of —— the speed of the future. If more of our customers bought our highest speeds, it would dramatically change our financial situation."
— Peter Schleidt, SEVP and Chief Operating Officer.

Most broadband consumers use devices that do not have a cable connection, but are connected through Wi-Fi networks instead. Typically, the telco will plug a cable into the household and install a wireless router broadcasting a Wi-Fi-signal. But the speed of the connection decreases as the user moves further away from the router. Being better at ensuring connection throughout homes could prove a future differentiation point for TDC Group.

"Many of our customers find it hard to understand why their connection is not as fast on their wirelessly connected devices as the one they bought. But at the same time, they don't exactly think their routers are pretty, and place them in drawers in the basement, which cripples the signal. We're finding it hard to communicate how these things fit together."
— Jens Raith, VP, YouSee Broadband.

Fragmented markets

In recent years, TDC Group has been pressured by regional Utilities (power companies) that have established fiber-based broadband infrastructure in their local regions. The result is a fragmented market, where nationwide telcos compete with small, regional utility companies. The Utilities' main selling point is that their fixed infrastructure technology is fiber-based, and therefore can deliver speeds that exceed those TDC Group can offer on its non-fiber infrastructure (see infrastructure appendix). To stay competitive, TDC Group is upgrading its fixed infrastructure, to ensure that half of the 2,8 million Danish households can receive a connection of at least 1.000 Mbps by the end of 2017. Part of this will be fiber, while another part will be upgraded coaxial cables.

"Fiber is often perceived as the superior 'technology of the future.' With our new coax upgrades, we are actually able to match or exceed fiber speeds for many customers, and we need to find a way to explain this to the market."
— Jens Raith, VP, YouSee Broadband.

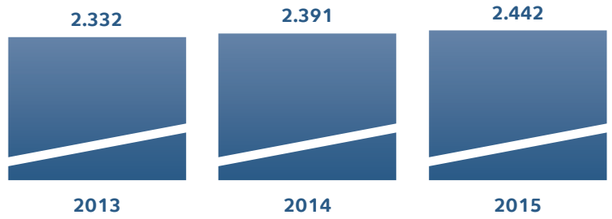
Further adding to concerns are early signs that the Broadband market may be facing the same kind of competition that has swept through the mobile market, due to the regulation framework requiring TDC Group to sell wholesale access to anyone. A no-frills, cheap, Broadband startup, Hiper, was launched in January 2016 by previous founders of broadband companies. They will presumably offer Broadband using TDC Group's infrastructure at regulated wholesale prices.

"We're expecting tougher price competition in the years to come."
— Jens Raith, VP, YouSee Broadband.

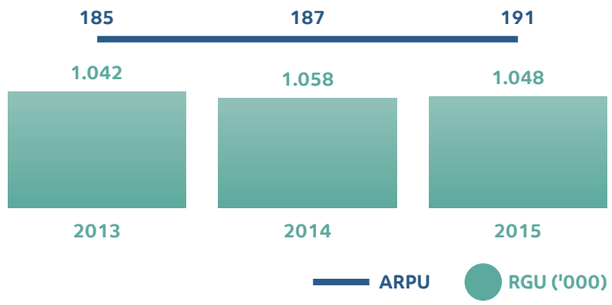
Broadband Consumer Market

Source: TDC Group

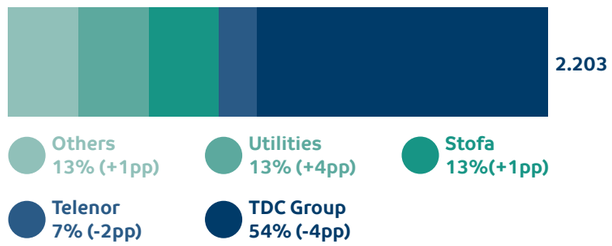
Revenue (DKKm)



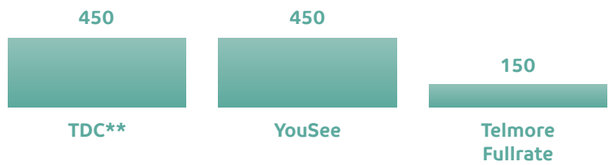
ARPU & RGU development



Market share RGU ('000). (change in pp. from 2013-2015)



Approximate 2015 RGU by Brands ('000)*



*Adjusted figures – for case purpose only

**To be merged with the YouSee Brand by June 30 2016

Fixed Line

A telephone receiver is the classic symbol of connectivity. Many will remember analogue dial-up phones standing on desks and hanging on walls in their childhood homes. But times change and in 2014, almost 60 percent of Danish households had no Fixed line voice connection, and more customers cancel their subscriptions every year. In 2014, for instance, the consumer market for Fixed line voice contracted by almost a fifth, and three thirds of the market value has vanished in little more than ten years. Subscriptions in the Fixed line voice market are disproportionately represented by senior customers, or by services for devices such as alarms.

"We have by now 600.000 subscribers, about 20 percent penetration of Danish households. In other words: we are still expecting churn."

— Pernille Erenbjerg, Group CEO and President.

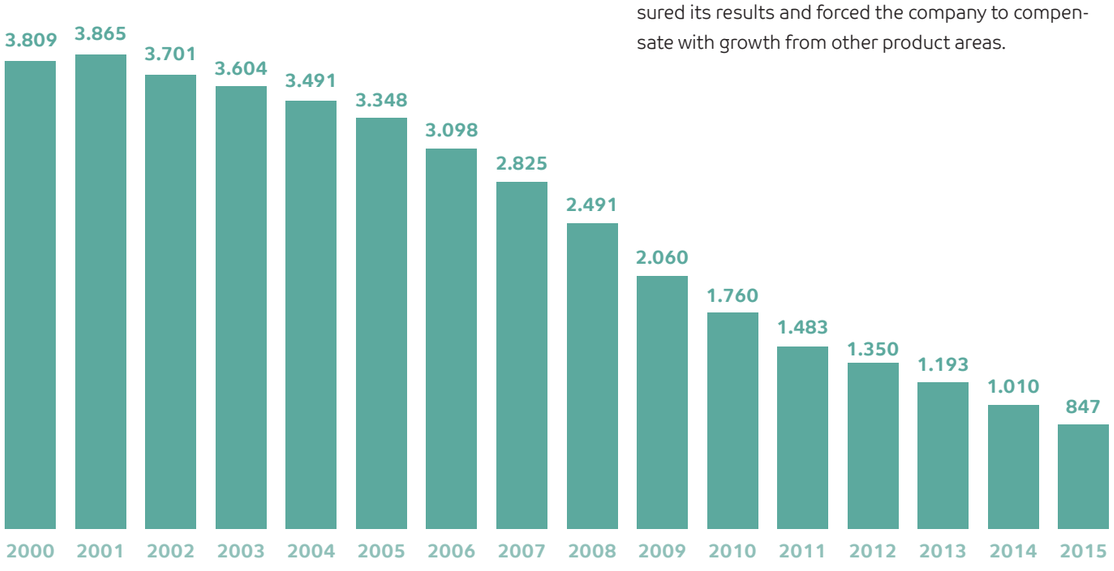
TDC Group's market position

Fixed Line voice was once the sole market for TDC Group, and its market share remains strong. In late 2014, TDC Group faced public scrutiny in parts of the Danish media landscape over Fixed Line price levels, with comparisons being made between the rapid declines seen in mobile pricing compared to more stable pricing levels in the Fixed Line market.

"Our customers don't see Mobile and Fixed Line voice as the same thing. Especially seniors like the comfort of their old phones and use them in a different way. Fixed line phone calls are, on average, twice the length of mobile phone calls."

— Frederik Sjørslev, SVP, YouSee.

For TDC Group's Danish consumer activities, Fixed Line voice still makes up a meaningful part of revenue and gross profits, but the overall market decline has pressured its results and forced the company to compensate with growth from other product areas.



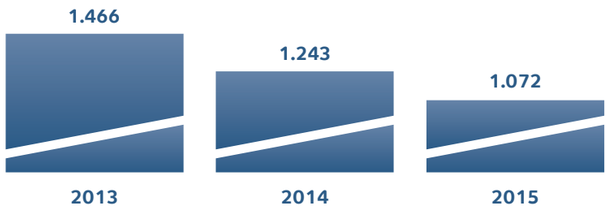
Historical development in TDC's Fixed Line RGU* ('000)

Source: TDC Group, *including business subscriptions

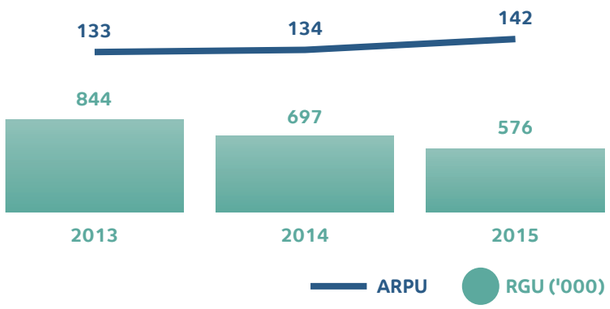
Fixed Line Consumer Market

Source: TDC Group

Revenue (DKKm)

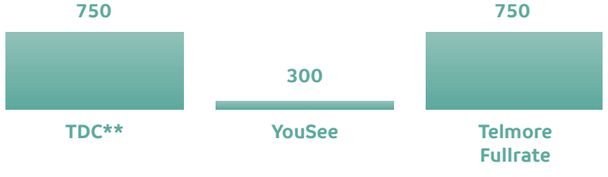


ARPU & RGU development



Market share RGU ('000). (change in pp. from 2013-2015)

Approximate 2015 RGU by Brands ('000)*



*Adjusted figures – for case purpose only

**To be merged with the YouSee Brand by June 30 2016

Closing remarks

The telco industry has gone through immense changes during the last decade, and with the speed of technological advances, there is no sign that anything is about to settle. Connectivity will continue to spread to new areas, and will invite new players along.
As has been obvious during the last few years, this poses some very substantial challenges for TDC Group, Denmark's leading telco. When you serve more than fifty percent of a market, it is bound to be felt when users cancel their legacy products, foreign competitors flood the market, global tech giants shake up the value chains, and agile startups slash prices by more than 70 percent. The backlash is seen across all parts of TDC Group, not least its market value: its share price has fallen by forty percent from August 2015 to February 2016.

"We have been through some tough times. And there are still tough times ahead."
— Pernille Erenbjerg, Group CEO and President.

However, the changing landscapes and technological possibilities also open a whole new world of opportunities for TDC Group. Within existing products and beyond, new and better ways of connecting people to their friends, families, and technology are emerging. TDC Group remains the Danish telco with the best network, the most customers, and plenty of other potential customers to win over. Keeping customers, investors, regulators, and employees happy, getting the revenue and earnings curves straightened out, and putting the company back on a growth track will be no easy task. But it is sure to be one of the most exciting journeys in Danish business in the coming years. In the words of CEO, Pernille Erenbjerg:

"Our fundamental value is centered around connectivity. Despite many challenges, the need for connectivity does not show any sign of decline: Our customers are spending more and more time in front of various screens. Where we need to go is where the disruptors of our industry are born: With the question of what customers really want."
— Pernille Erenbjerg, Group CEO and President.

Appendices

Financials

TDC Group

		2015	2014	2013	2012	2011
Income Statement	DKKm					
Revenue		24.366	23.344	23.986	25.472	25.606
Gross profit		17.484	17.092	17.431	18.154	18.811
EBITDA		**9.809**	**9.804**	**9.979**	**10.136**	**10.306**
Operating profit (EBIT)		**(618)**	**3.808**	**4.115**	**4.438**	**4.347**
Profit/loss before income taxes		(1.725)	2.793	3.432	4.320	3.817
Profit/loss for the year from continuing operations		(2.384)	2.452	3.078	3.691	2.721
Profit/loss for the year		**(2.384)**	**3.228**	**3.119**	**3.784**	**2.752**
Income Statement, excluding special items						
Operating profit (EBIT)		**4.498**	**5.076**	**5.047**	**5.176**	**5.194**
Profit before income taxes		3.391	4.060	4.364	4.298	4.664
Profit for the year from continuing operations		**2.502**	**3.529**	**3.766**	**3.444**	**3.389**
Profit for the year from continuing operations		2.502	3.551	3.780	3.448	3.442
Retail RGUs in Denmark						
Mobile subscriptions	('000)	2.576	2.566	2.655	2.679	2.729
TV	('000)	1.386	1.420	1.393	1.392	1.337
Broadband	('000)	1.329	1.358	1.361	1.327	1.289
Fixed Line	('000)	847	1.010	1.193	1.350	1.483
Employees						
FTEs (end-of-year)	#	8.705	8.594	8.587	8.885	9.551
FTES and temps (end-of-year)	#	8.854	8.681	8.712	9.097	10.051

Infrastructure and Technology

Most of TDC Group's infrastructure consists of large collections of fiber cables transporting data between cities and regions, known as the backbone network, covering the entire country. From a business as well as a customer perspective, the most important parts are, however, the ends of the network turning toward the customers: either the last meters of cables going into the households or businesses, or the mobile masts.

Mobile infrastructure

The mobile network is distributed from a network of more than 4.000 mobile masts placed all around Denmark. The capacity for data traffic is determined by the technology in the masts and their proximity. A wide range of technologies exists, and are normally aggregated into "generations" — 2G (with Edge technology for data traffic: E), 3G and 4G. This is what mobile phones typically show when they're connected. In 2015, TDC Group finished a large-scale overhaul of its mobile network in cooperation with Huawei, a Chinese telco equipment manufacturer, bringing 4G to 98 percent of the population. Today, TDC Group's mobile network is the fastest in the country, with average speeds of 28 Mbps. While this is faster than many broadband connections, the mobile network does not have capacity to handle all the Internet traffic that runs over fixed infrastructure today.

Fixed infrastructure: Broadband, TV, and Fixed Line

Cable infrastructure can be split into three technology types: DSL, coax, and fiber. Each type is sufficient to deliver all telco services, including broadband, TV, and voice, since such signals can be converted into Internet traffic. However, this requires, in some cases, a modem or a TV box. The oldest technology, DSL, serves customers with basic (low-to-medium) speed, whereas coax and fiber deliver high-speed broadband. Before the brand merger, YouSee delivered only coax-based services while TDC Group brand provided DSL- and fiber-based services.

With the 2016-2018 strategy, TDC Group has taken an important step acknowledging the development toward Internet-based traffic: from 2016 and onward, there will be built at most one type of cable to any household, and only the best technology available. This means the country is now split into four parts (see figure on next page). In Area 2, TDC Group has a fiber connection to the home. In Area 1, TDC Group has no fiber, but will upgrade the broad coax network to allow speeds of 1.000 Mbps, comparable to fiber speeds. In Area 3, typically rural areas, TDC Group will offer DSL-based broadband at lower speeds. In Area 4, TDC Group will face competition from utilities that have been rolling out fiber to households — here, TDC Group will attempt to lease access to third-party networks through strategic partnerships.

"The utility companies lay fiber everytime they dig down power cables anyway. In addition to that, they seem to require lower returns on their investments. Financially, we are simply not able to roll out fiber with the same aggression, not least because we are obliged to give every competitor access to it."

— Jens Raith, VP, YouSee Broadband.

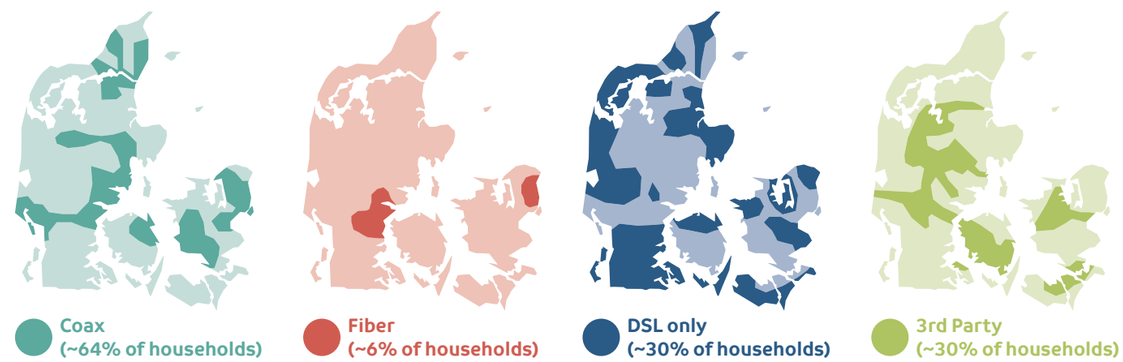
Coax: Coaxial cables are what is meant by the "cable" part of cable TV. Coax networks were originally laid to supply households with TV. Later, they have been used extensively for data traffic, since they can carry more traffic than DSL. Converting the coax signals to the Internet, however, requires an additional modem. Today, only 25 percent of YouSee's coax customers have one, but toward 2018, this number will double. Coax can deliver Internet speeds in the range up to 1000 Mbps with TDC Group's new technology.

DSL (Cobber): DSL (Digital Subscriber Lines) or cobber lines have been used for telecommunications since the industry was born more than a hundred years ago. The classic fixed lined phone technology ran voice signals through cobber cables. Today, due to technological improvements, DSL cables can deliver Internet speeds in the range up to 40 Mbps.

Fiber: Fiber-optical cables are the newest type of cables, sending traffic as light signals instead of electrical current. Fiber has a higher data capacity than any other cable technology, but it is also more than what is necessary to meet most households' demands. Utility companies, that supply households with electricity, have for years been laying fiber cables whenever they lay down power lines anyway. This has created a steadily expanding fiber network on the hands of utility companies. In 2009, TDC Group acquired the entire fiber network of DONG Energy — the largest Danish utility company — in northern Zealand, and have entered an agreement with smaller fiber providers in other regions. Fiber can deliver Internet speeds up to 1000 Mbps.

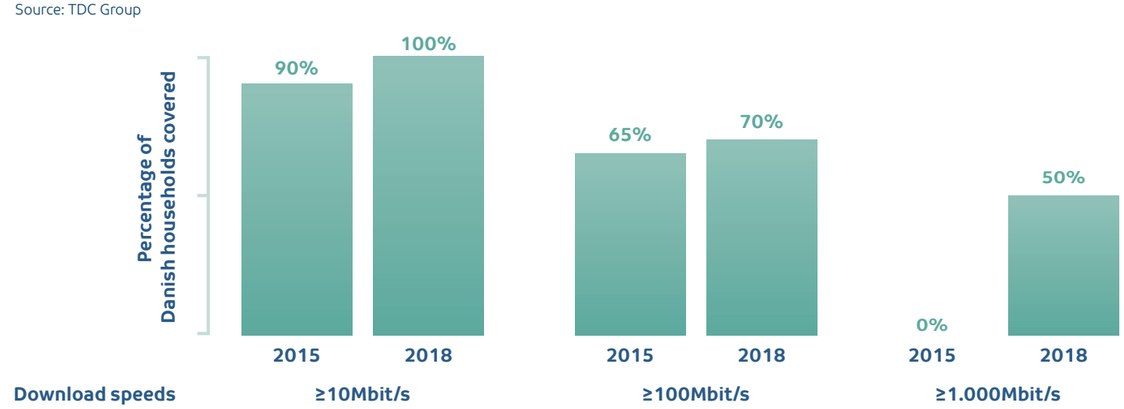
The four regions of TDC's 2018 Fixed Infrastructure Strategy

Source: TDC Group



Planned speed and coverage upgrades on TDC's network by 2018

Source: TDC Group



Customer Segments

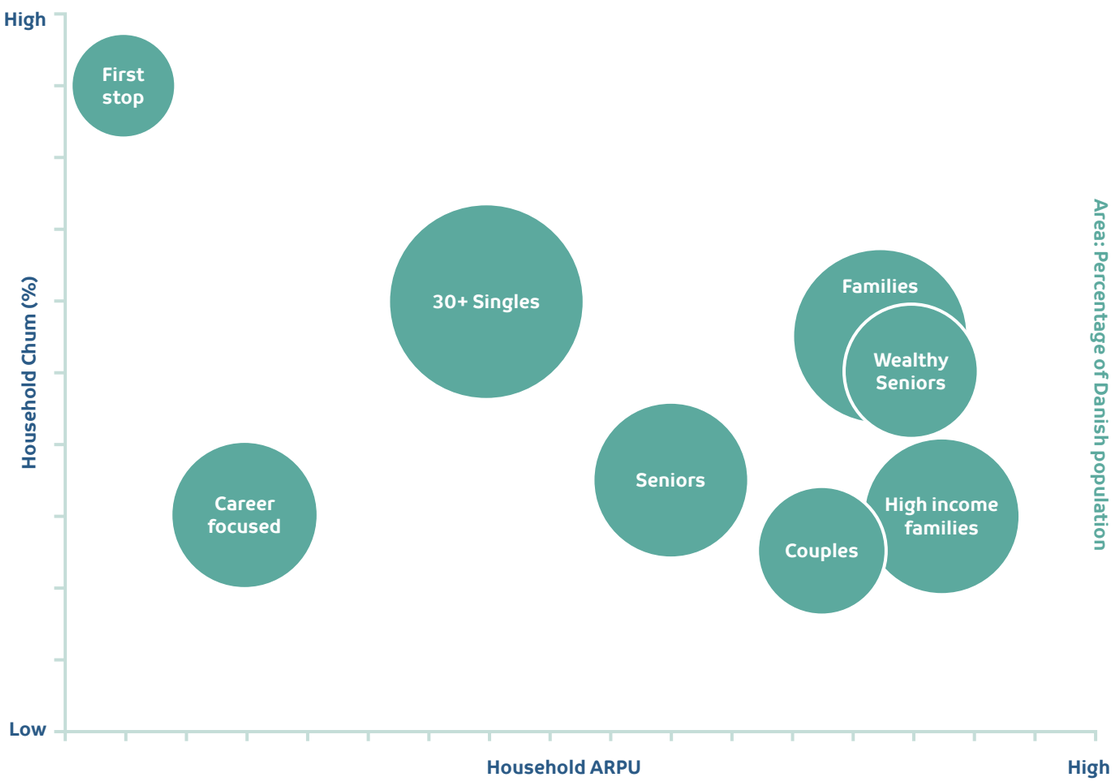
To help make sense of the broad market, TDC Group uses a segmentation framework classifying Danish households into one of eight segments. Each segment is based on the age of customers in the household, their willingness to pay (price sensitivity) and their family status. TDC Group uses this segmentation framework when developing new products and service packages, producing TV and print commercials, and selecting brand ambassadors. Apart from the segmentation, algorithmic approaches are used to individually target specific customers, particularly those who are at a high risk of churning or cancelling their existing services.

"We have strong data points on many Danish households and consumers, and this area is improving as our brand and entertainment offerings become more and more integrated. We will definitely work to find practical and legal ways to leverage this in new and better business models."

— Jesper Bæk Overgaard, VP, Business Intelligence Competence Centre.

Household segments by ARPU, Churn, and relative size

Source: TDC Group



Major household segments

Source: TDC Group

First Stop

6% of population. 1 person per household. Age: <30 years
Income: <200.000 DKK Copenhagen, large suburbs.

Born into the digital age make them perceive telco differently than other generations. They are rather price sensitive and make conscious choices about the need for telco services. The mobile phone is their focal point but also broadband is key for this segment. TV is usually used as background noise, or not used at all.

Career Focused

12% of population. 1 person per household. Age: 20 - 40 years
Income: <400.000 DKK Copenhagen Area.

Urban singles who are always up to date with the latest, also technology. They prefer everything to be online or wirelessly accessible. Broadband is a vital equipment for work and experiences, and the mobile phone is an indispensable item used for all activities throughout the day; work, exercise, socializing etc. TV is increasingly being substituted by streaming.

30+ Singles

21% of population. 1 person per household. Age: 30 - 59 years
Income: <400.000 DKK Copenhagen, small suburbs.

Low income singles spend a lot of time for themselves and consume large amounts of content and entertainment. They are very pleased with Flow TV, which serves as a day and evening activity. Broadband is essential for their entertainment consumption, but they are sensitive to prices. Calls and messaging is the primary use for their phones.

Couples

9% of population. 2 persons per household. Age: 35 - 59 years
Income: 400.000+ DKK Small suburbs.

Connectivity and access to TV is something that is required, but they do not think much of it - it just needs to work. Essential to them is the mobile, as it connects them to family and friends. The TV is still required in their homes, but they are starting to reconsider their consumptions, and may migrate to the basic packages.

Families

16% of population. 3+ persons per household. Age: 35 - 59 years
Income: 600.000+ DKK Small suburbs.

TV and digital equipment is incorporated in the daily routines. The Mobile also serves as an essential item, because it is used for coordinating daycare, school, dinner and work. Additionally, it is used for entertaining the children and adults on the go. Equally important is Broadband and TV for the routines. Recently, the children of the family have been streaming and playing more games online.

High income families

13% of population. 4+ persons per household. Age: 35 - 59years
Income: 800.000+ DKK Copenhagen Area, small suburbs.

Connectivity is freedom and flexibility, and value is when they do not have to worry about coverage, speed, content and accessibility. Internet and mobile is critical for effective hours, and a tool for more sources of entertainment, knowledge and music. They expect to get access to what they want, when they want it. Streaming and apps are diminishing the need for Flow TV.

Seniors

13% of population. 1 person per household. Age: 60 + years
Income: <300.000 DKK Larger suburbs, rural areas.

Telco services are perceived as difficult and complicated, and the engagement is therefore low. They are usually assisted by friends and family when choosing and installing products. TV plays a majority role in their lives. Mobile is starting to become adopted, but the Fixed Line is the primary source for conversations, as it is associated for some to be the real phone.

Wealthy Seniors

10% of population. 2 persons per household. Age: 60 + years
Income: 400.000+ DKK Small suburbs, rural areas.

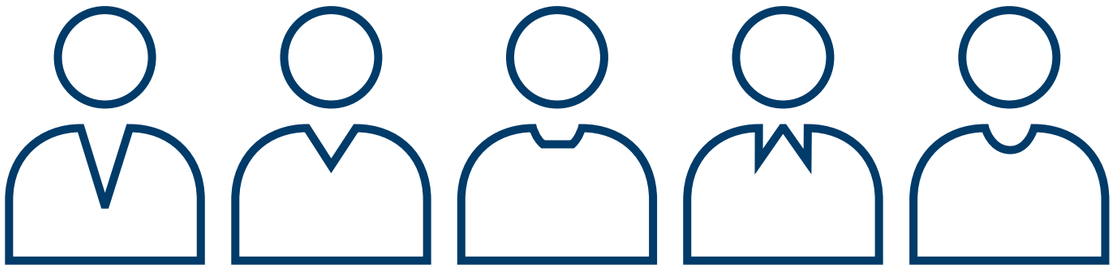
The new technology is complicated, but is adopted so that their children and grandchildren can use it when visiting. Keeping up with their network of friends and family is imperative, and the mobile phone serves that purpose. Yet 2/3 also hold on to their Fixed Line connection. TV allows this segment to keep up to date with the news, and for entertainment in the evening.

Customer Satisfaction

Customer satisfaction survey results, by operator

Source: TDC Group

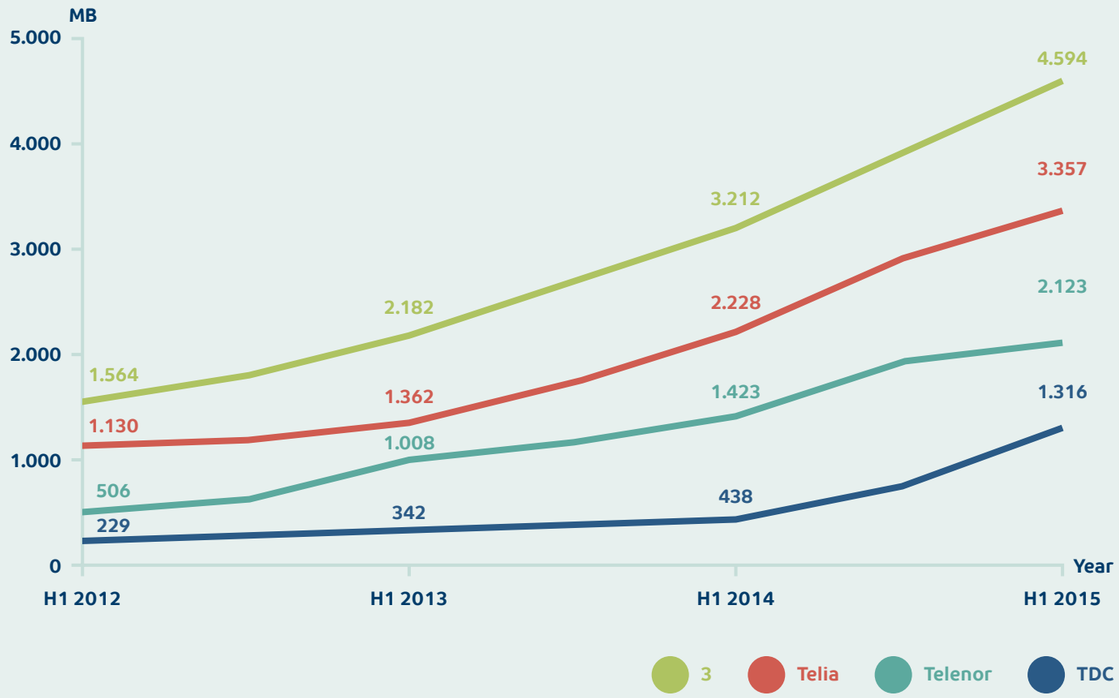
Questions	TDC	YouSee	Telia	Telenor	3
Recommendation Score	60	60	72	72	70
If you were to choose a new operator today, how likely is it you would choose the same?	66	62	71	75	69
How likely is it that you are still a customer at your current operator in 6 months?	76	76	79	85	77
The operator's marketing is relevant for me (TV-commericals, social media etc.)	47	49	53	53	51
The operator is good at informing me preemptively of technical changes/disruptions etc.	56	67	67	64	59
The billing is easy to understand	66	66	76	75	74
The operator explains changes in subscription prices in an understandable manner	61	62	73	70	68
What is your absolute evaluation of the operator's ability to make it easy for the customer?	64	64	76	74	72
There is satisfactory possibilities for self-service at the operator	67	67	77	73	75
The operator's products are simple to use	75	73	81	80	76
The operator give me freedom to compose the solution which works best for me and my family	64	55	76	75	69
The operator's entertainment services are relevant for me *(movies, tv-series, music, audiobooks, archives, magazines etc.)*	44	49	54	35	34
The operator is first on the market with new products and services	52	52	56	53	57
What is your collective evalutation of: value for money by the operator?	65	60	76	72	69
The operator's prices are reasonable	55	53	72	70	65
The operator's prices are transparent	55	57	73	70	68
Contact within the first ½ year (% of yes)	47	48	57	53	58
Purchase of a product within the last ½ year (% of yes)	15	15	0	33	33
How do you perceive the selection of mobile subscriptions?	72	80	75	73	71
How do you perceive the quality of mobile coverage?	79	77	81	76	69
How do you perceive your broadband speed?	72	76	75	76	76
How do you perceive the selection of TV channels?	77	73	76	n/a	n/a
How do you perceive the possibility to select the TV channels you want?	66	53	66	n/a	n/a



Mobile

Average data usage in MB per half year, per SIM card, by operator

Source: Telestatistik 2015



TV

Four archetypes of Danish TV viewers

Source: Medierapport, Danmarks Radio

Cable Lovers
– 59 percent of Danes
Cable lovers are typically older than 40 and live in households with a TV in every room, with the news channels running during the day and TV shows at night. They like the classic Flow-TV, and use OTT services less than weekly. Cable lovers choose the largest TV packages from telcos such as YouSee, and are interested in specialized channels, to follow professional golf or football. Cable lovers watch around six hours of TV every day, and are often families, often in the more rural parts of Denmark.

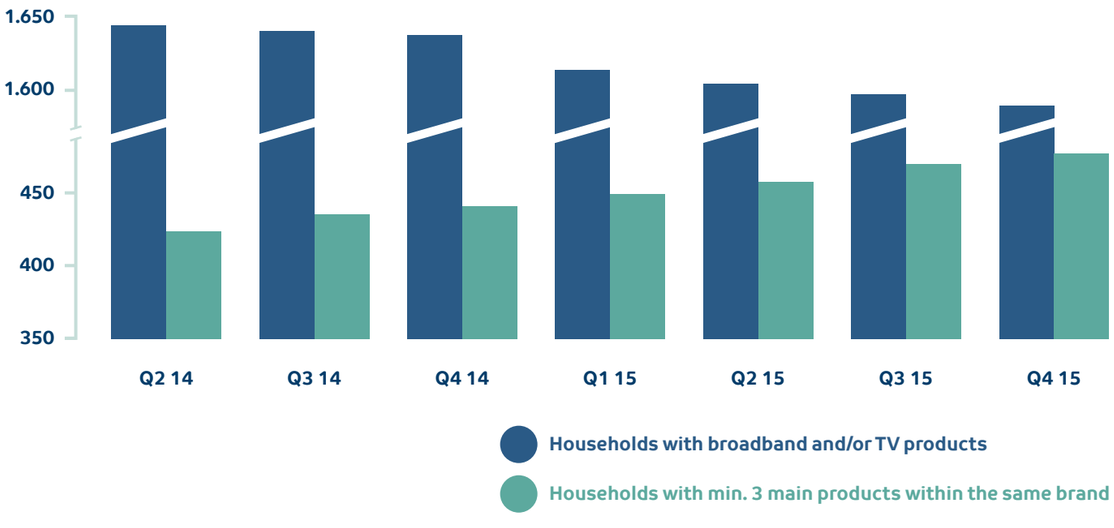
Cable Cutters
– 5 percent of Danes
Cable cutters are those who cancel their TV subscriptions. They are well-versed with digital devices, and are quite comfortable in having only OTT offerings. They stay updated on news through social media or online news platforms, and watch sports in bars or with friends who still have TV.

Cable Shavers
– 34 percent of Danes
Cable shavers are families between 30 and 39 years, who used to have the large TV packages, but found the recent years' price hikes too high. They like to have their Flow-TV supplemented with OTT services such as HBO or Netflix, and value integration between the TV and their tablets and smartphones. They are more likely than cable lovers to be urban families.

Cable Nevers
– 3 percent of Danes
Cable nevers is the young group of "digital natives," who have never had a TV subscription, and don't feel any need to. They view less than twenty minutes of classic TV per day on average, and get their entertainment needs covered by OTTs, or online platforms such as YouTube.

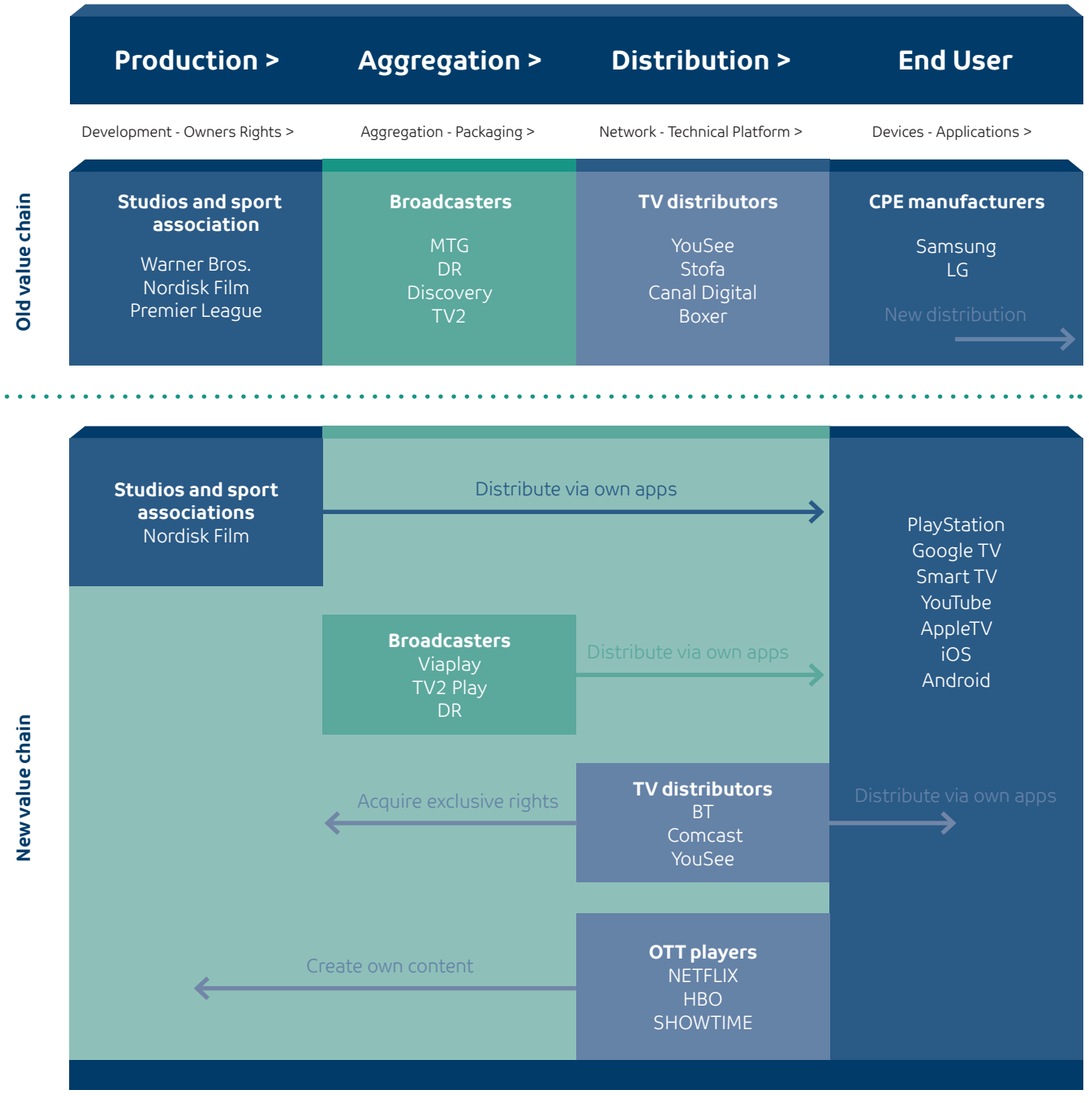
Households holding more than one product, TDC Group

Source: TDC Group



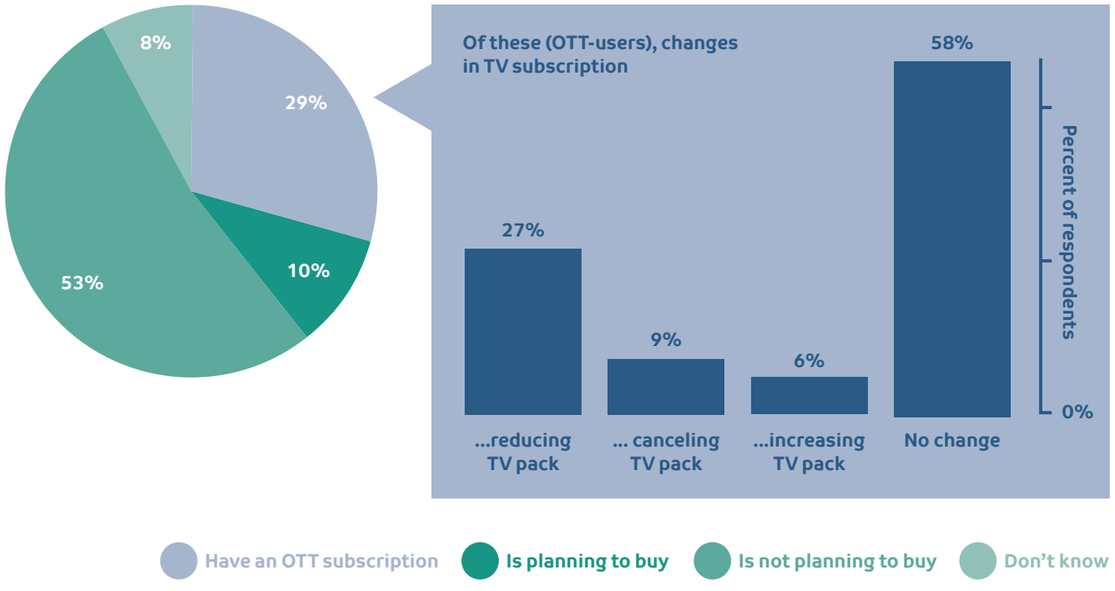
Old and new TV Value Chain

Source: TDC Group



Survey of Danish OTT users and their subsequent TV behavior (2015)

Source: TDC Group



TV Competitive landscape

Source: TDC Group

	Cable (Coax)		IPTV (xDSL & Fiber)		DTT (antenna)	DTH (satallite)	
	DK distributors						
Broadcasters	YouSee	Stofa	Waoo!	TDC	Boxer	Viasat	Canal Digital
DR	✓	✓	✓	✓	✓	✓	✓
TV2	✓	✓	✓	✓	✓	✓	✓
MTG Danmark	TV3 3+ 3Puls TV3 Sport	TV3 3+ 3Puls TV3 Sport	TV3 3+ 3Puls TV3 Sport	TV3 3+ 3Puls TV3 Sport	TV3 3+ 3Puls TV3 Sport	TV3 3+ 3Puls TV3 Sport	TV3 3Puls
Discovery Networks Danmark	Kanal 4 Kanal 5 Kanal 6 Kanal 9	Kanal 4 Kanal 5 Kanal 6 Kanal 9	Kanal 4 Kanal 5 Kanal 6 Kanal 9	Kanal 4 Kanal 5 Kanal 6 Kanal 9	Kanal 4 Kanal 5 Kanal 6 Kanal 9	Kanal 4 Kanal 5 Kanal 9	Kanal 4 Kanal 5 Kanal 6 Kanal 9

Case Writers

Kristoffer Forné Strøberg

Oskar Harmsen

Thanks to

TDC Group

Pernille Erenbjerg, Group CEO and President

Michael Moyell Juul, SEVP, Online Brands

Jens Aaløse, SEVP and Chief Customer Officer

René Brøchner, SEVP, YouSee

Peter Schleidt, SEVP and Chief Operating Officer

Jens Raith, VP, YouSee Broadband

Christian Phillip Morgan, VP, Content

Frederik Sjørslev, SVP, YouSee

Simon Højmose, SVP, Corporate Financial Services

Morten Boe Andersen, Senior Director, YouSee Strategy & Business Development

Jesper Bæk Overgaard, VP, Business Intelligence Competence Centre

Lise Bering Søby, SVP, Customer Experience Transformation

The case could not have been completed without,

Laura Marie Larsen, Senior Director, YouSee & Online Brands HR

Stine Kamp Bendixen, Senior Strategy Consultant, Online Brands Strategy & Business Development

Julie Aakvist Steengaard, Associate Consultant, Group Strategy

Camilla Glad, Creative Media Planner, Talent Acquisition

Mathias Lysholm Faaborg, Senior Director, Online Brands Strategy & Business Development

and many more.

Graphic design

Rikke Wehner Hein, Art director

Martin Okholm, Art director

Thomas Grønholdt, Media graphic designer

Advisor

Mads Wadstrøm Christensen, The Boston Consulting Group

Case testers

Katharine Bendt

Katja Eberhardt

Theis Malmborg

Finn Jannik Schmidt

Mads Schou-Andreasen

Case Video

PRODUCED BY