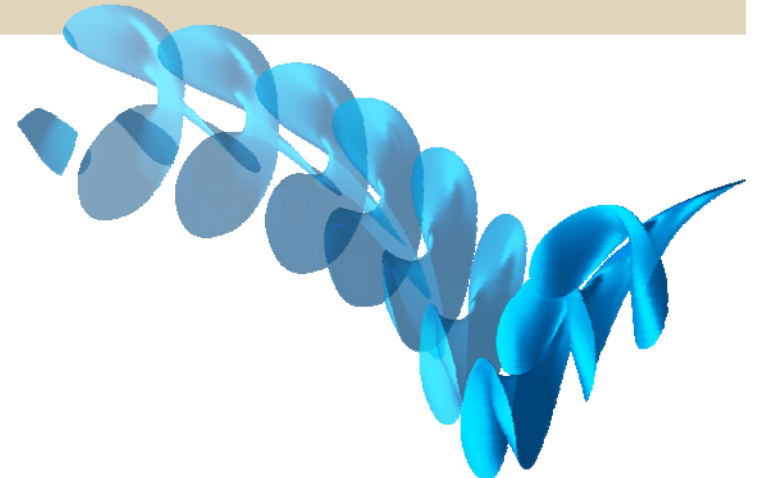


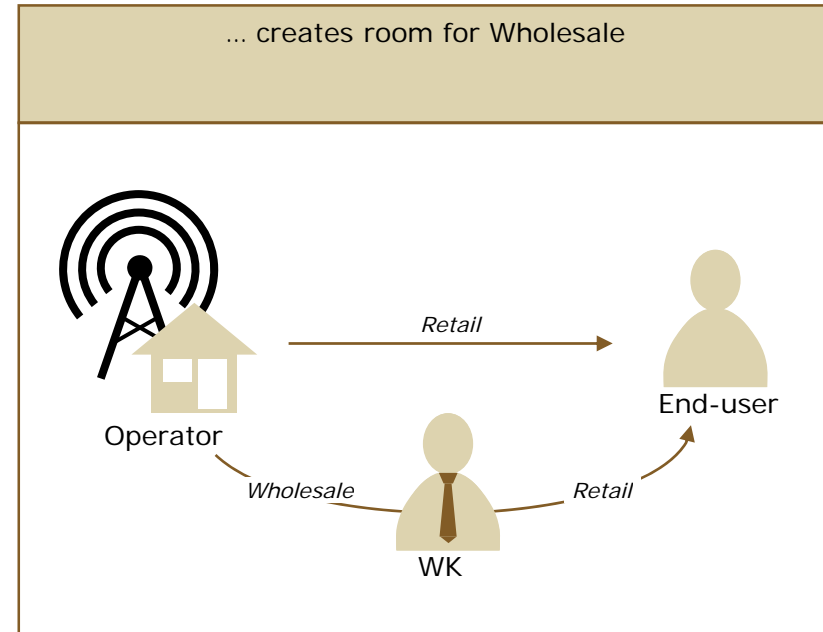
telenor

Telenor Denmark - Wholesale

MVNO SIP model - VoIP providers are entering into MVNO agreements



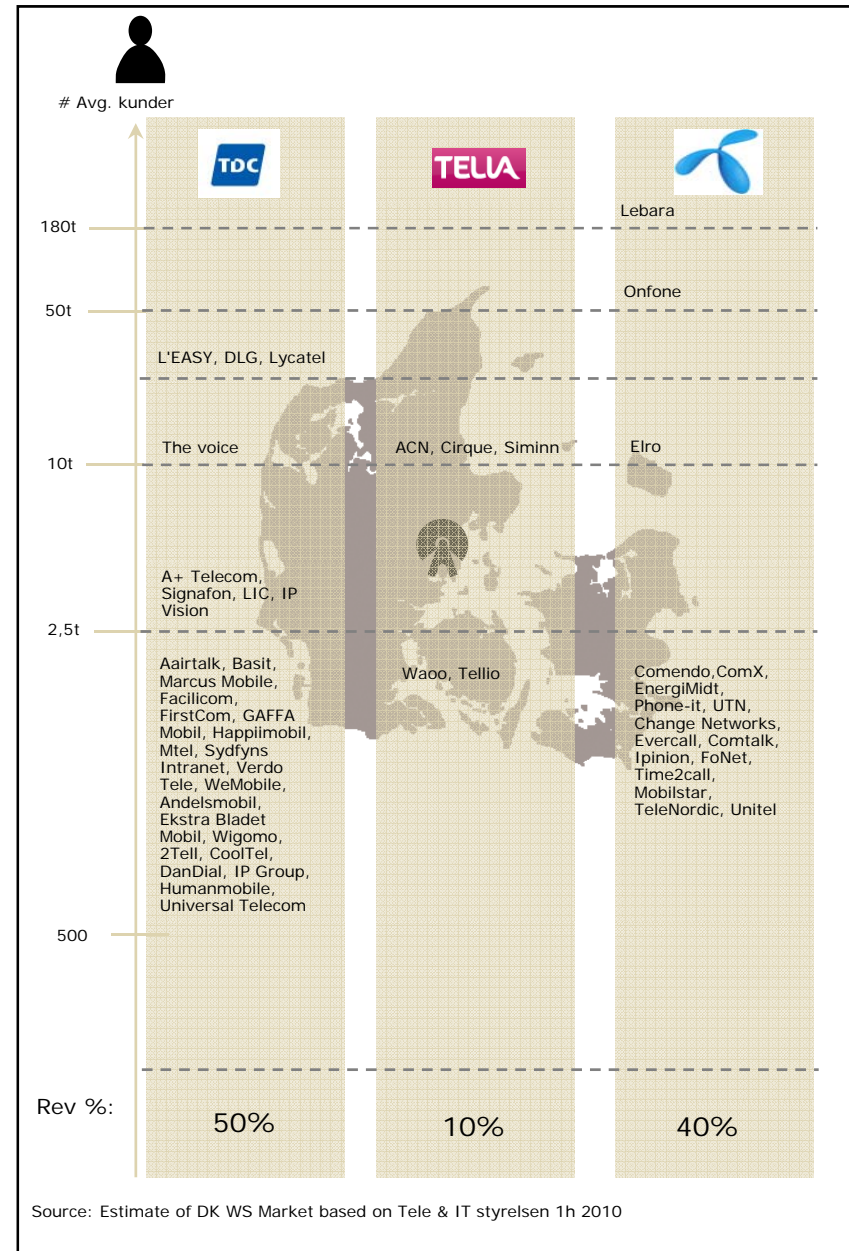
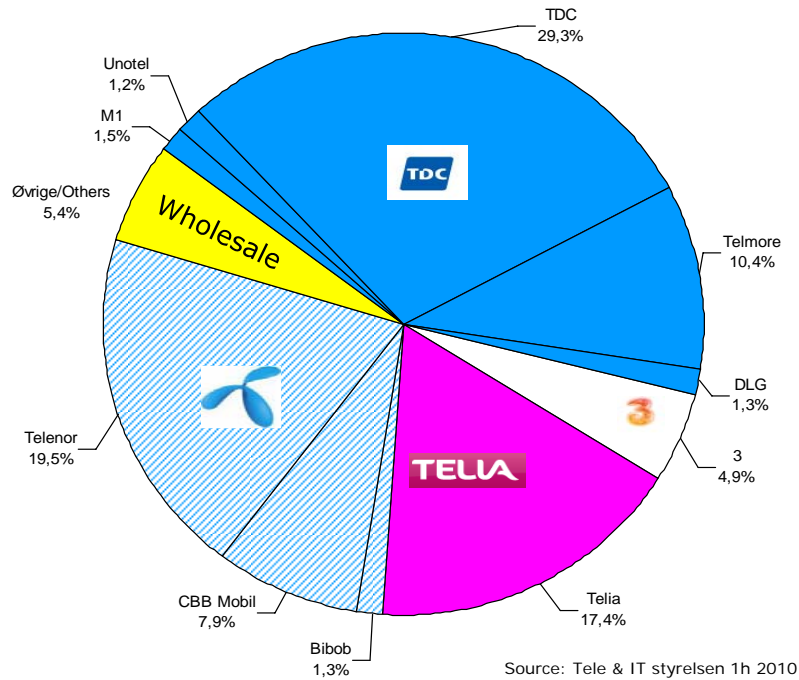
Today's Danish Wholesale Market is competitive in which Telenor DK is second to the incumbent...



- 1997 - Danish Market is regulated by IT & Telestyrelsen in order to increase competition
- 2009 - Danish Market is concluded adequate competitive and de-regulated by IT & Telestyrelsen
- Present – 48 independent telco's in the DK Wholesale market

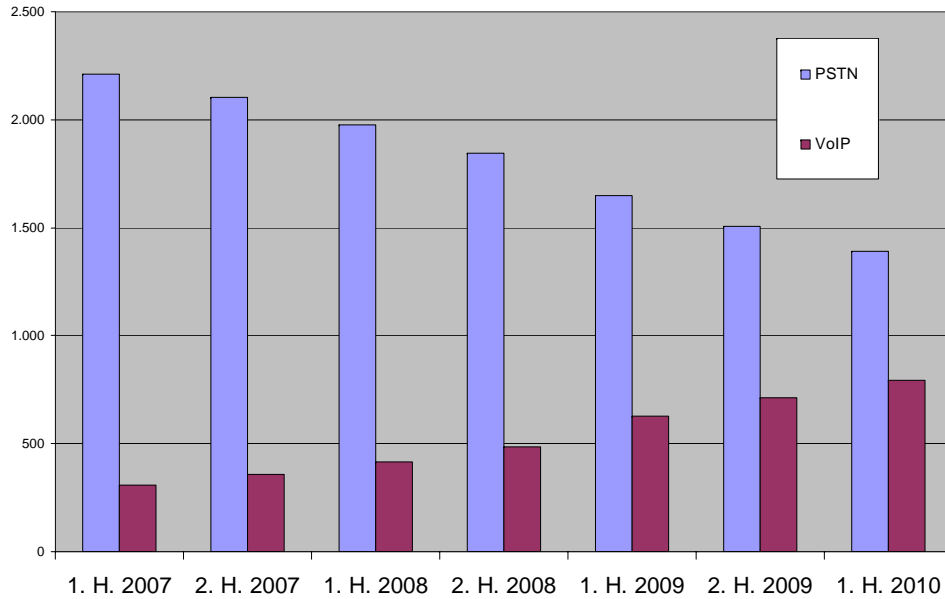
Telenor DK's position in the Danish Wholesale Mobile Market

- 48 independent companies
- App. 370.000 end-users (1h 2010) ~ 400t ult. 2010
- Total Market Value app. 100 mEuro

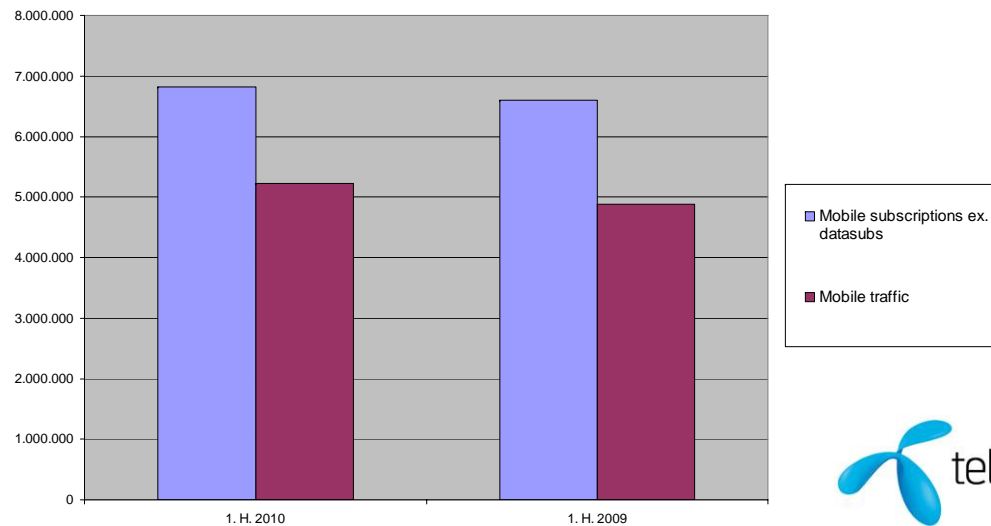


The figures for VoIP and Mobile subscriptions and traffic

Number of PSTN and IP subscriptions



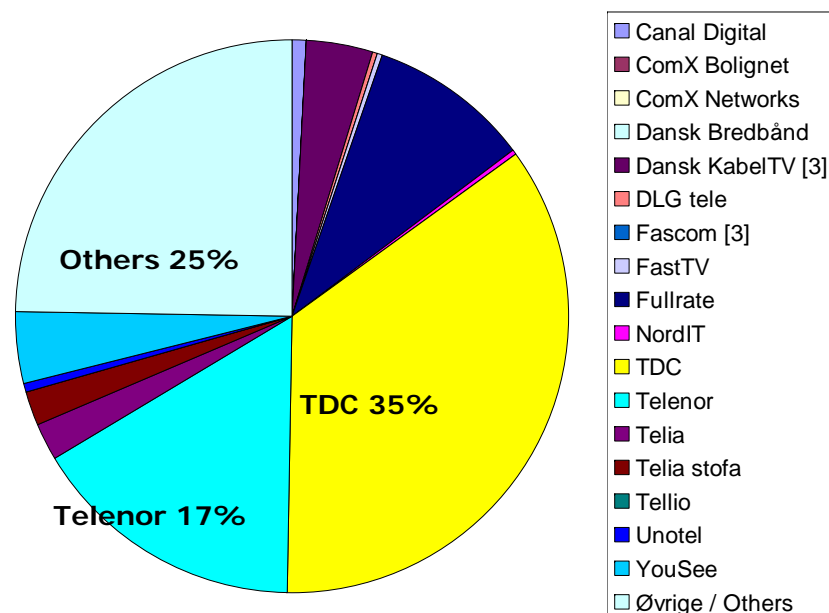
Mobile Subscription and minutes



The figures for VoIP and Mobile subscriptions and traffic

Main Indicators, 2009-2010			
Ultimo / End of	1. H. 2009	1. H. 2010	+/- pct.
Subscriber lines – fixed network	2.251.442	1.904.901	-15,4%
IP telephony subscriptions	628.964	793.151	26,1%
IP telephony traffic (1000 min.)	751.741	996.322	32,5%
Mobil subscriptions	7.017.526	7.558.851	7,7%
Mobile subscriptions per 100 inhabitants	127,1	136,3	7,2%

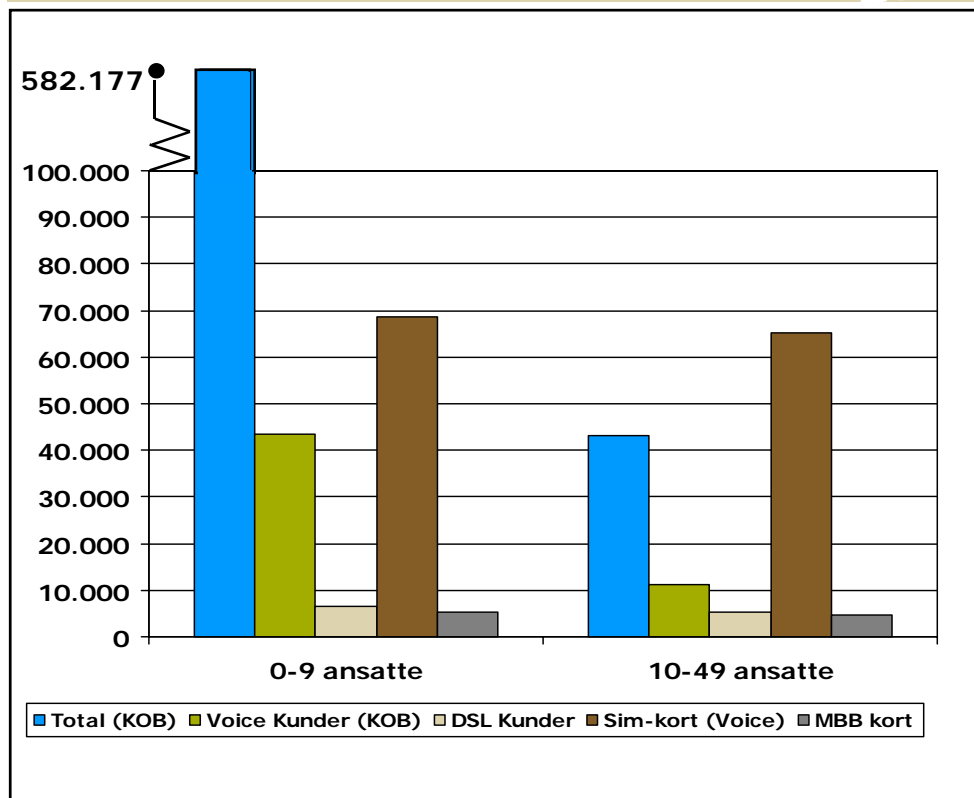
IP subscriptions by company



MVNO-SIP segments...

- Business – approx 75% of existing MVNO-SIP customers
 - Residential Associations, TV aerial association (Antenna)
 - Medium and low Tech. – Soho

2. SoHo/SA Market in period – H1. 2010



Marked share

- Company numbers in segment 0-9 / 10 - 49 employees
- Marked share in voice in segment 0-9 employees = **10,7%**
- Marked share in voice in segment 0-9 employees 10-49 = **25,8%**

Wholesale customers is split into four groups when looked at responsibilities in the value chain

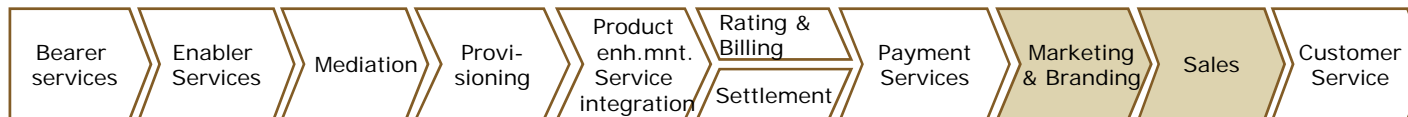
BUSINESSMODEL

VALUE CHAIN

Opgaver varetaget af

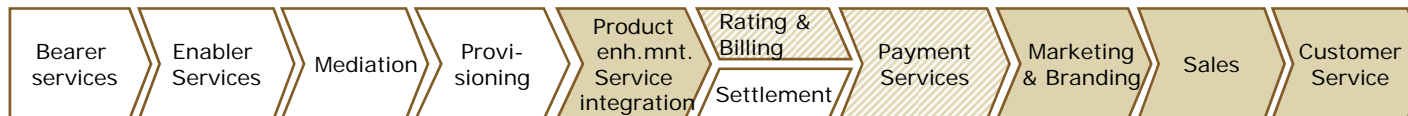
- Operatør
- Wholesale kunde

MVNE-WK



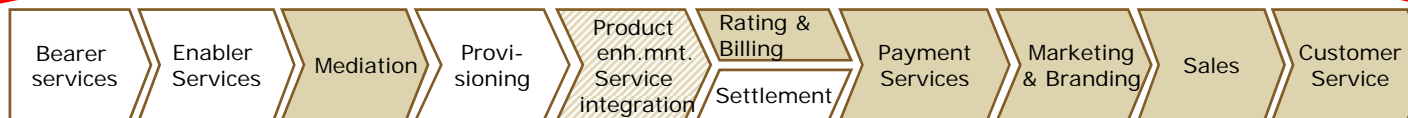
- Wholesaler sells and do marketing
- Telenor holding everything from network to billing and customer service

Service Provider



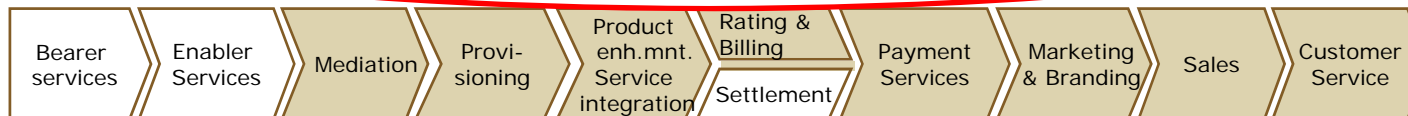
- Wholesaler handle sales, marketing, product configuration, billing of end-users and customer service
- Telenor perform network provisioning, called routing, billing, international calling and roaming

MVNO-SIP*



- Wholesaler during sales, marketing, product configuration, calls diversion, invoicing end-users, and customer service/support
- Telenor during network, provisioning, rating, Data (SMS), international calls and roaming

MVNO**

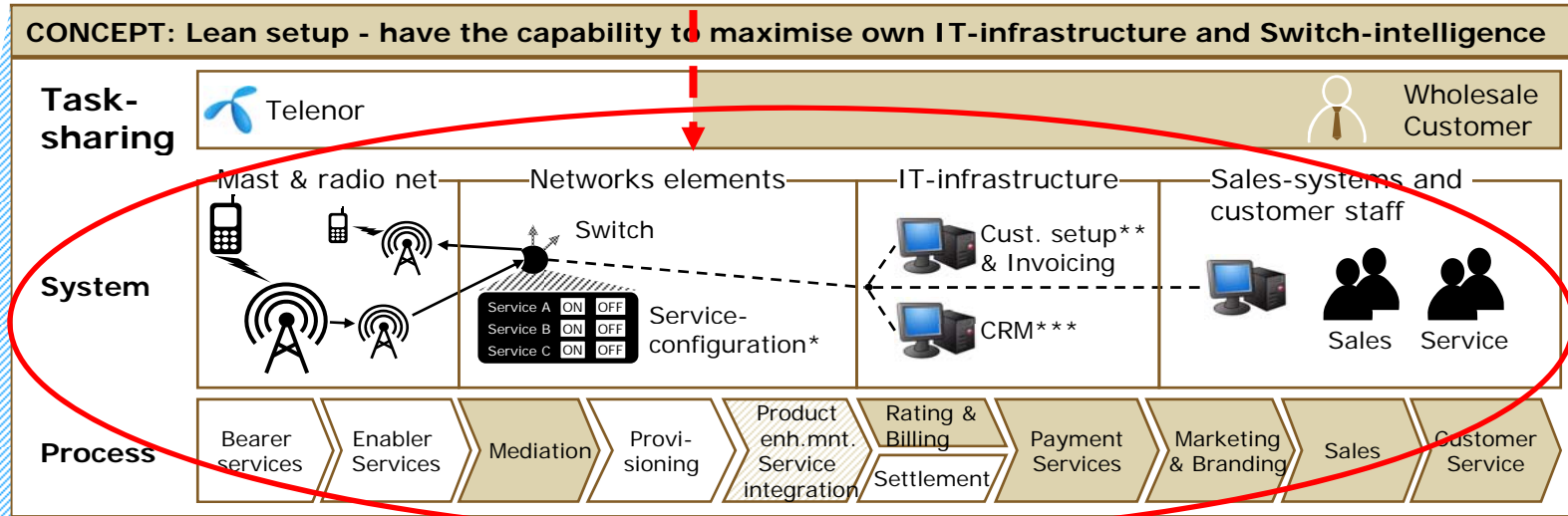


- Wholesaler performing anything except radio network
- Telenor holding the radio network

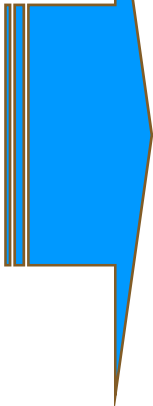
Share of value chain



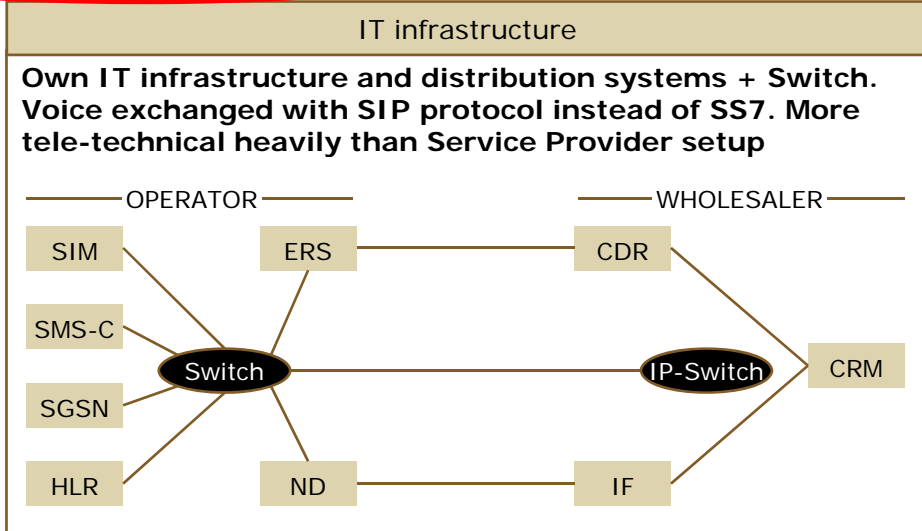
MVNO-SIP System Architecture



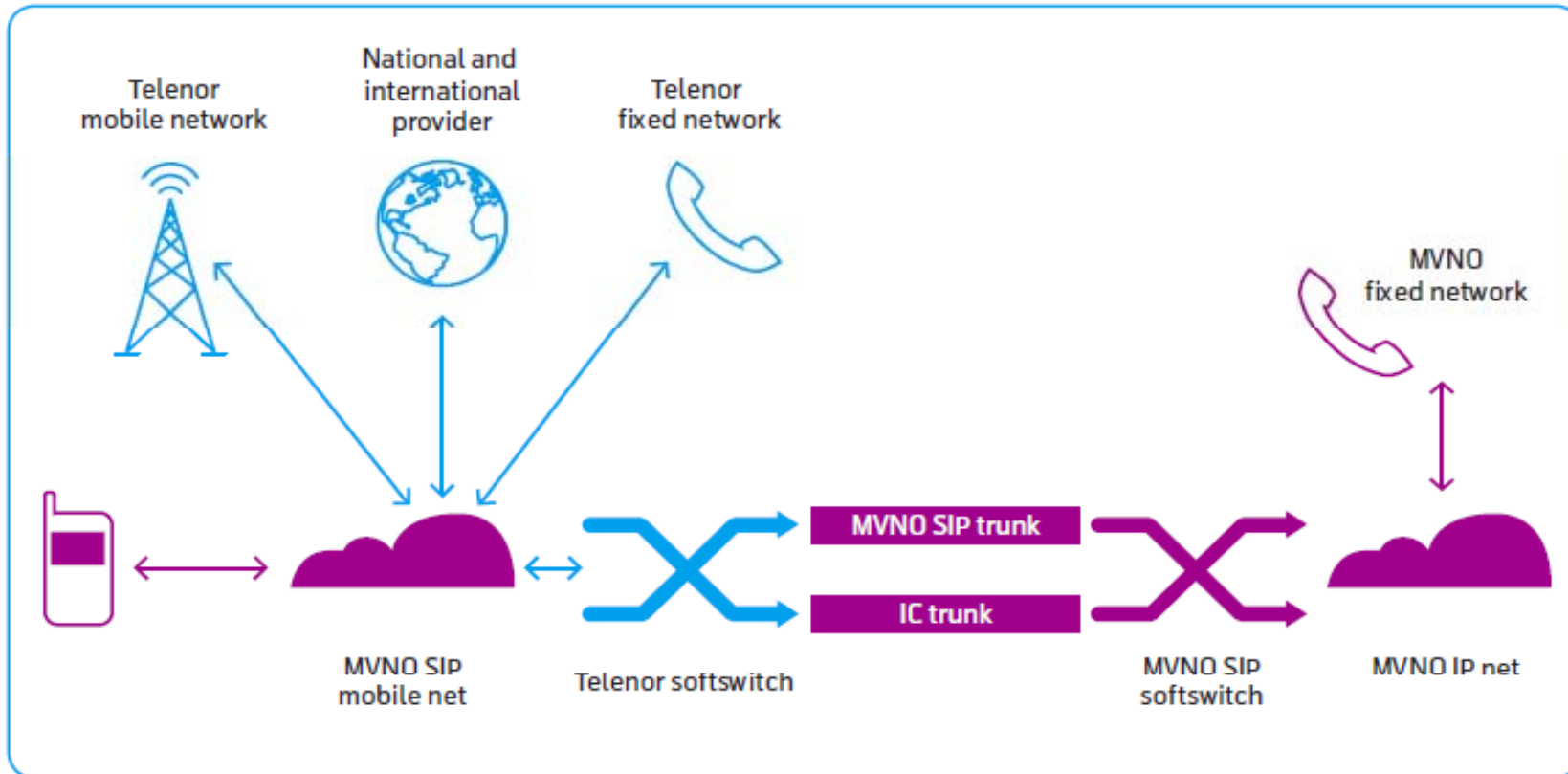
MVNO
SIP



PRODUCT
Own postpaid products with their own configurations and functionalities. Telenor delivers just 'tracks and signaling system'
END-USER SEGMENTS
Privacy and medium segment in Business
WHOLESALE CHARACTERISTICS
Wholesalers in Soho/SME



MVNO SIP – Architecture and Presence information



Statusinterface:

- Status (online / offline) [mobile switched on / off / out of coverage]
- Call waiting [activation / deactivation of service]
- Show / hide number [activation / deactivation of services]
- Call forward / Diversion [activation / deactivation of service and for what number]
- Operator selection [Telenor / otherwise roaming operator]
- Celle ID information [Location based services]
- GPRS APN Attach [terminal attached / deattached to GPRS APN]

Getting your own Virtual Mobile Network

– with the MVNO SIP Product

Get full control over the calls

The MVNO SIP Product is an improved version of our traditional mobile resale product that provides you with the full control of how calls are handled. This ability empowers mobile service providers to offer more innovative and rich mobile products such as unified communications and convergence products to their clients.

Your own Virtual Mobile Network

The MVNO SIP Product includes a connection to Telenor's mobile network that allows you to create a virtual mobile network for your customers. Settlement of the traffic on this connection is made on a monthly basis. Each hour we provide you with information of every single call so you can keep track of the activity of your customers.

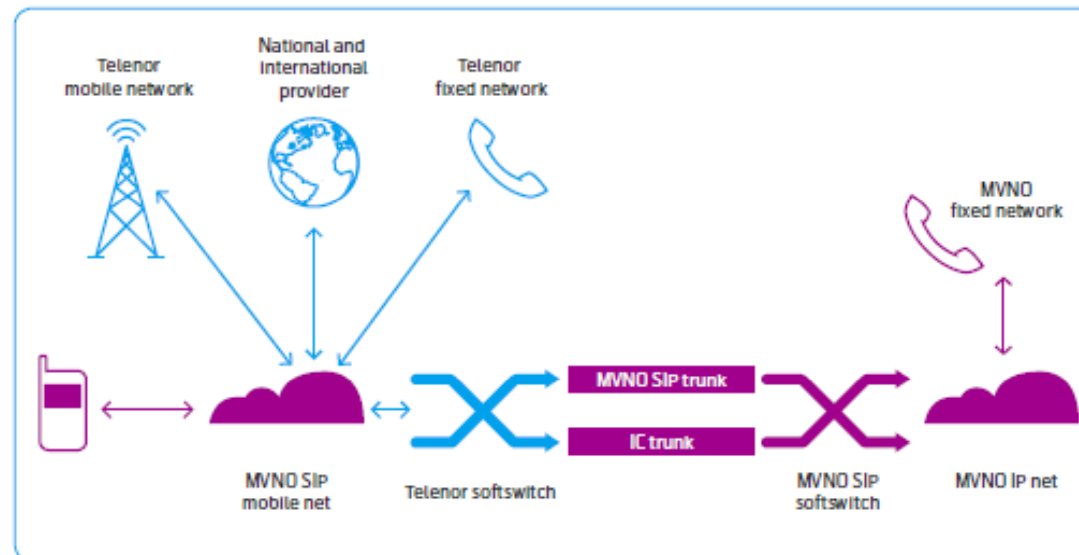
How it works

All calls to and from a mobile device associated with the MVNO SIP Product will be forwarded to your softswitch through the SIP protocol. This way you can integrate mobile and fixed line services and basically make the two networks melt together.

Requirements

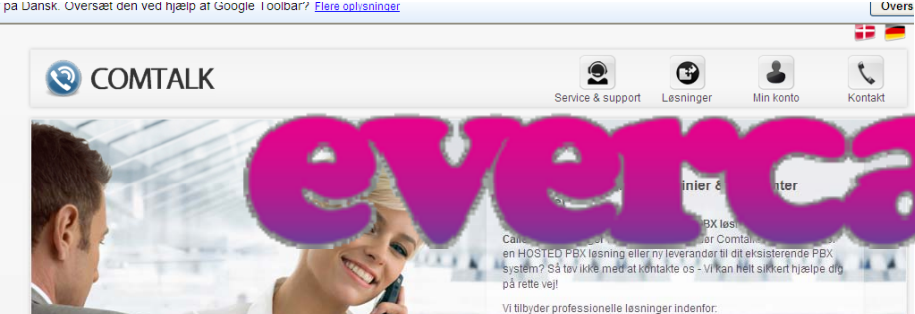
To use the MVNO SIP Product you must have a softswitch that can distribute traffic between the mobile network and interconnect link. It is also on this platform that you can develop your own services and solutions. You are responsible for obtaining the number series at the Danish Telecom Agency. You must also make an appointment with OCH (Operators Clearing House) and install ICH (Internal Clearing House). Telenor will however assist you with the SIM cards.

[See the technical specifications on the next page ►](#)



MVNO SIP – customer types

- Hosted PBX
- SIP Trunks
- Mobile
- Security
- Broadband (mobile and xDSL)



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Ring billigt til indland & udland
Med Time2call-kort



MVNO SIP – customer types

SKYLINE FORSIDE PRODUKTER TILMELD

- Bredbånd
- IP Talk
- Digitalt TV
- Mobilt bredbånd
- Mobiltelefoni

Produkter

Skyline tilbyder i dag en række produkter, bl.a. bredbånd, IP-Talk, digitalt TV, mobilbredbånd og mobiltelefoni.

Bredbånd eller bredbånd + IP-Talk

Bestil her

Få ubegrænset adgang til internettet og fri telefoni til andre fastnetnumre i Danmark 24 timer i døgnet.

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Produkter Om Change Networks Kontakt os Support One Stop Shopping Hosted Services

IP TELEFONI

INTERNET

MOBIL TELEFONI

VI SÆLGER LANGTIDSHOLDBAR KONKURRENCEEVNE

FIBERHASTIGHED TIL KOBBERPRIS

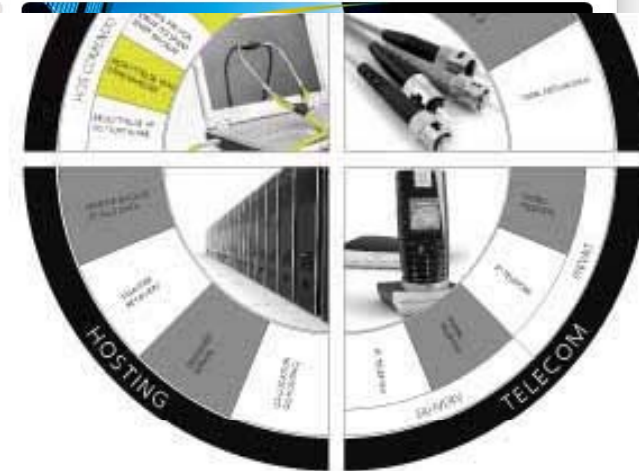
50/50 Mbit/s Fiber til kun **4.895,-** pr.md.

Gratis oprettelse inden 31. maj

Alle priser er excl. moms

Microsoft Unified Communications Microsoft Office Communications Server

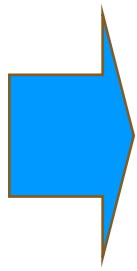
Capability	On-Premise Solutions	Cloud Solutions
<p>Messaging</p> <p>Achieve higher reliability and performance with features that simplify your administration and enhance the security of your communications at lower cost.</p> <p>Learn more about Exchange Messaging</p> <p>Exchange 2010 Favorite Feature Videos</p>	<p>Microsoft Lync Server 2010</p> <p>Hover for Details</p> <p>Learn more about Lync Server 2010</p> <p>Try Lync 2010 Today</p>	<p>Microsoft Exchange Online</p> <p>Hover for Details</p> <p>Learn more about Exchange Online</p> <p>Try Exchange Online FREE with the Business Productivity Online Standard Suite</p>
<p>Voice Mail</p> <p>Save costs over traditional voice mail systems by consolidating e-mail and voice mail onto one inbox, giving users flexibility to access their voice mail with a telephone, computer, or mobile device.</p> <p>Learn more about Voice Mail with Exchange Unified Messaging</p> <p>How to Choose the Best Voice Mail Solution</p>	<p>Microsoft Exchange Server 2010</p> <p>Hover for Details</p> <p>Learn more about Exchange 2010</p> <p>Try Exchange 2010 FREE Today</p>	
<p>Telephony</p> <p>Scalable Voice-over Internet Protocol (VoIP) solution allows users to place, receive, forward, or delegate calls right from their PC, desk phone, or mobile phone.</p> <p>Learn more about Telephony</p> <p>Integrating Telephony with Office Communications Server 2007 and 2007 R2 Whitepaper</p>		
<p>Instant Messaging and Presence</p> <p>Contact people based on their presence—up-to-date availability information. Then click to communicate from secure instant messaging, to a phone call, desktop sharing, or video conferencing session.</p> <p>Learn more about Instant Messaging and Presence</p>	<p>Microsoft Office Communications Server 2007 R2</p> <p>Hover for Details</p> <p>Learn more about Office Communications Server</p> <p>Try Office Communications Server FREE Today</p>	<p>Microsoft Office Communications Online</p> <p>Hover for Details</p> <p>Learn more about Office Communications Online</p> <p>Try Office Communications Online FREE with the Business Productivity Online Standard Suite</p>



Telenor wholesale data tariffs, in order to enable the success of mobile broadband

Retail Data tariffs from MVNO

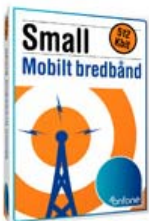
Small Screen Data - Average usage for Nokia – 50 MB, Android – 120 MB, iPhone – 180 MB



Telenor Wholesale Mobile Data tariffs to Mobile MVNO company

SMALL SCREEN Data Usage up to MBs/month	Price per MB
200.000	0.20
1.000.000	0,17
5.000.000	0,14
25.000.000	0,12
Above 25.000.000	0,10

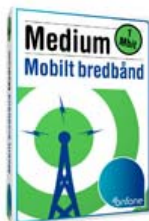
Maximum Speed	Monthly charge
1024/384 Kbit/s	4
3,6 / 1,4 Mbit/s	8
7,2 / 1,4 Mbit/s	16
Max / Max	24



Mobilt bredbånd Small

- 512 Kbit hastighed
- 1 GB inkluderet forbrug pr. måned
- Oprettelse kun 99 kr.

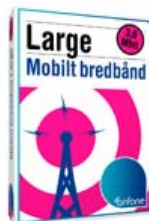
69,- pr. måned



Mobilt bredbånd Medium

- 1Mbit hastighed
- 5GB inkluderet forbrug pr. måned
- Oprettelse kun 99 kr.

79,- pr. måned



Mobilt bredbånd Large

- 3,6 Mbit hastighed
- 10GB inkluderet forbrug pr. måned
- Oprettelse kun 99 kr.

199,- pr. måned



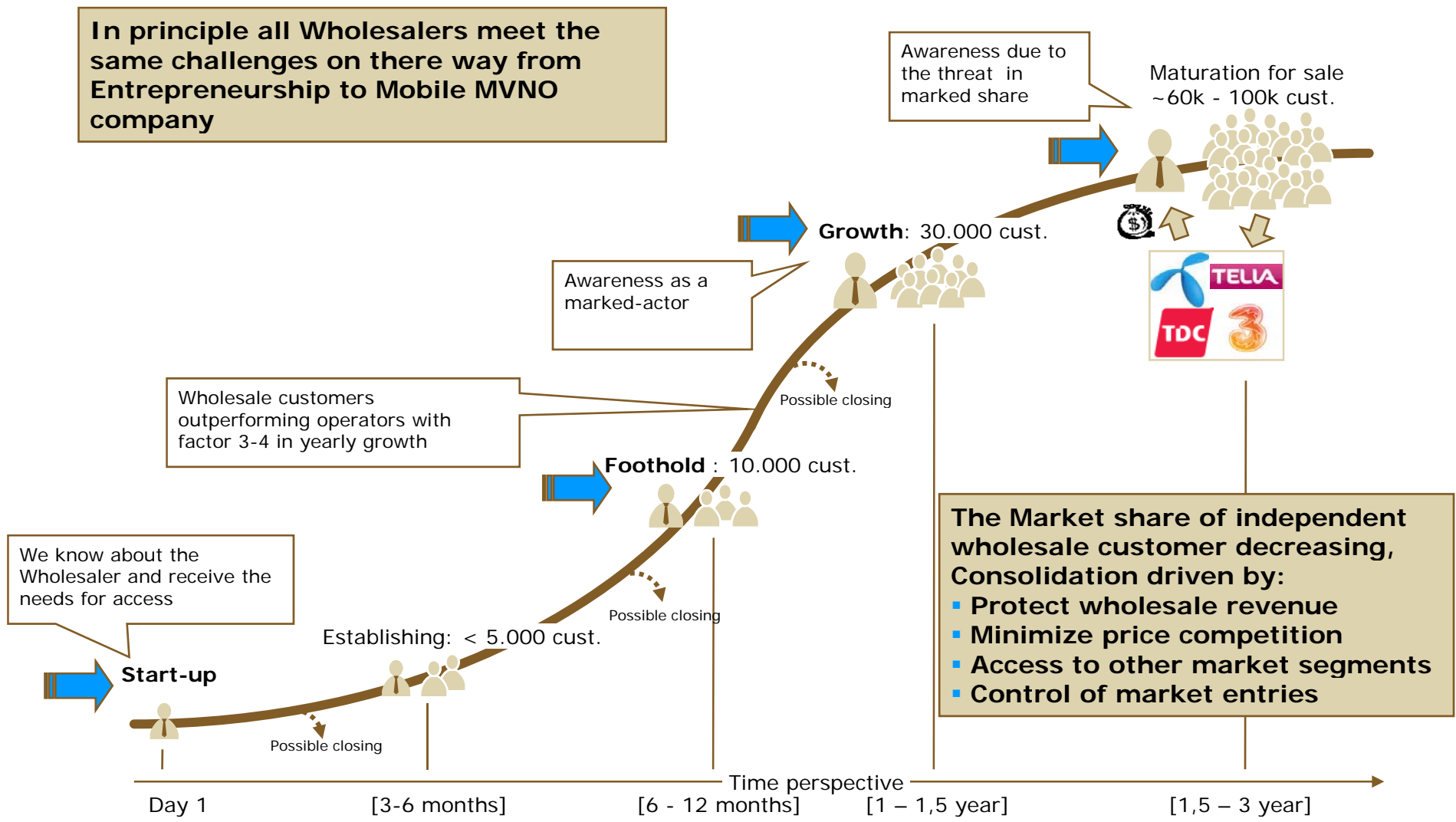
LARGE SCREEN DATA PACKAGE	1	2	3
Monthly charge	59	119	185
MB included	5 GB	10 GB	25 GB
Out of bundle charge (per MB)	0,20	0,20	0,20
Activation – one time charge	10	15	15
Speed Mbit/s (down/up)	1 / 1	4 / 2	15 / 5
Voice activated	No	No	No

Dongles not included



Development track for Wholesalers ... and Growth program

In principle all Wholesalers meet the same challenges on there way from Entrepreneurship to Mobile MVNO company

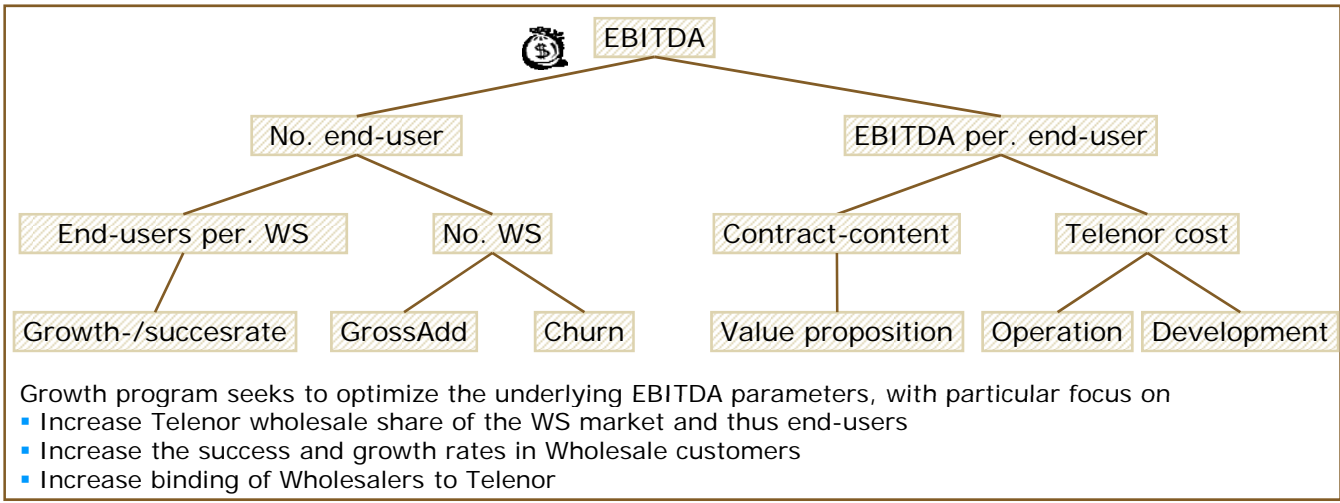


Wholesale Strategy and the way forward

- Continue to sign with the most promising Wholesalers
- Clearly described plan for the four faces
- Simple and structured agreements

GROWTH program:

- Increase the number of **end-users** in Telenor DK's network
- Increase **EBITDA**



- Questions

