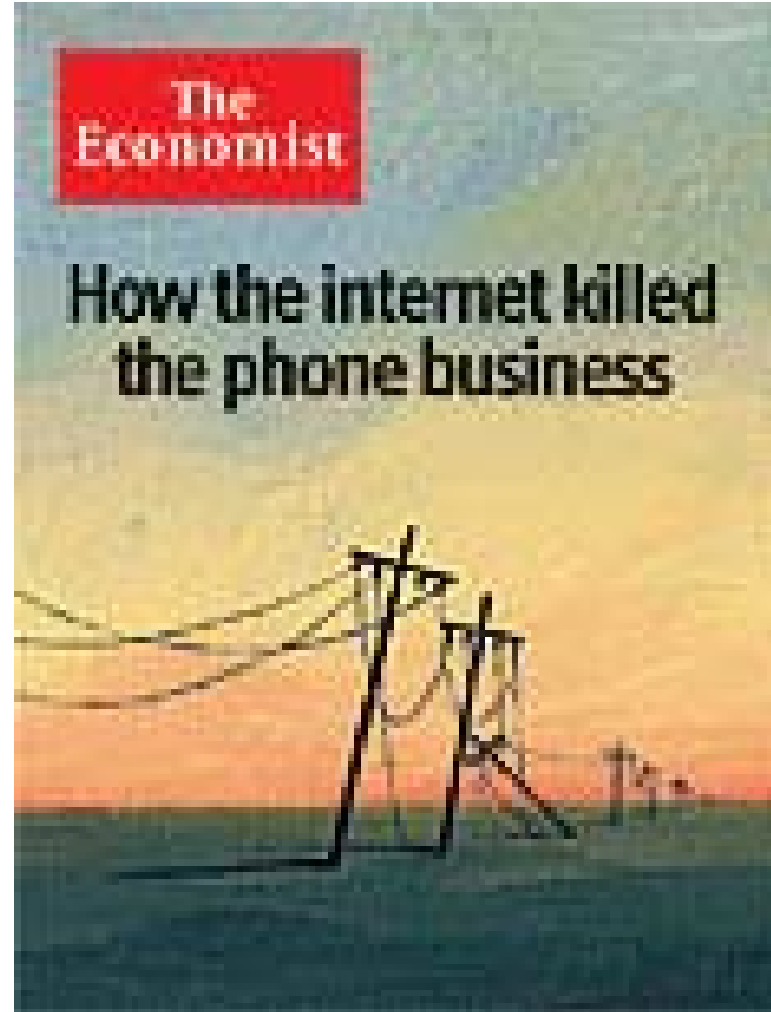


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VoIP - our industry perspective



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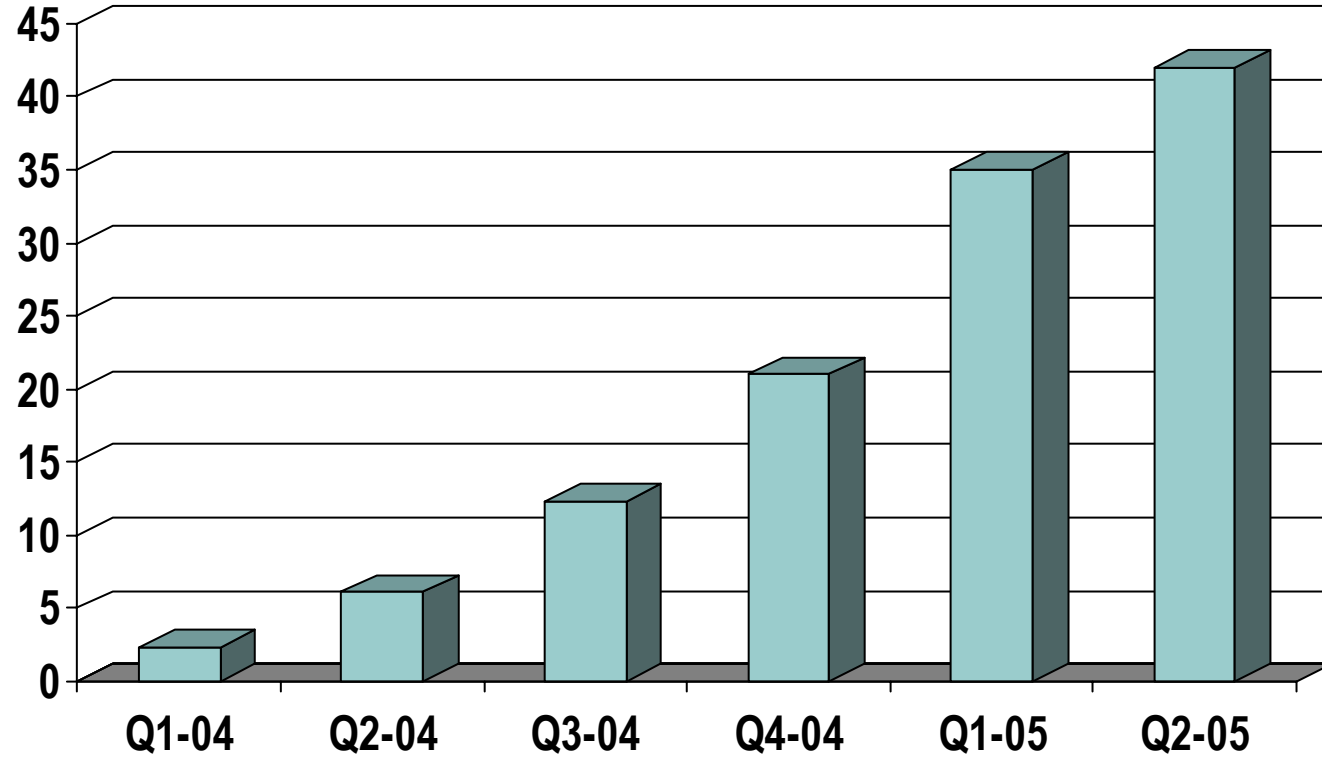
Telio in short

- Norway's first, largest and fastest growing ITSP (Internet Telephony Service Provider)
- Offices in Norway, Sweden, Denmark, Holland and Switzerland
- Key focus is primary line replacement with high value add mobile integration services
- Telio technical management and advisory board include many of the world's pre-eminent SIP and VoIP experts
- Named on Pulver 100 list two consecutive years
- 60-70 employees and more than 65 000 subscribers (Norway + Denmark) end of August
- Q2 revenues of 42,7 MNOKs and H1 revenues of 77,7 MNOKs
- Q2-05 pre tax profit of 5,7 MNOK and H1 pre tax profit of 11,9 MNOKs
- Offering technology platform on OEM basis to ISPs/carriers
 - Enables rapid, low risk, low cost entry into VoIP for anyone with an installed customer base.

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Sales/quarter



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Telio is undisputably No.1 VoIP player in Norway

2004 results MNOK	Telio	IP24	Tele VoIP	Briiz	One Call AS	Phonect AS
Omsetning	42,1	2,4	1,2	1,4	0,1	0,1
Res. f.skatt	2,4	-3,6	-0,27	-2,9	-0,9	-0,7
EK	30,5	-1	-,016	-2,1	-0,03	-1

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New services will play an important role in building value add to the customers - without charging more!



s so far, more

*WLAN
'K intercontinental flights)
ty"*

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.... and mobile integration services will take off next year

Examples of

- Internati
- 70-80%
- Wide ba
- Free Vic
- SMS/MM
- VoIP co
- Dual mc



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The implications of IP going wireless is dramatic

- The distinction between fixed and wireless voice become *meaningless* – we see only an IP address!
- Make it obvious for consumer that VoIP limited to POTS replacement become inferior product
- More dramatic implications for cell phone operators than fixed line operators
 - Voice more expensive and high part of service offering – more to lose
 - In the near term, hard to compete with wire line broadband offerings
- May force cellular carriers to transform themselves to wireless ISPs



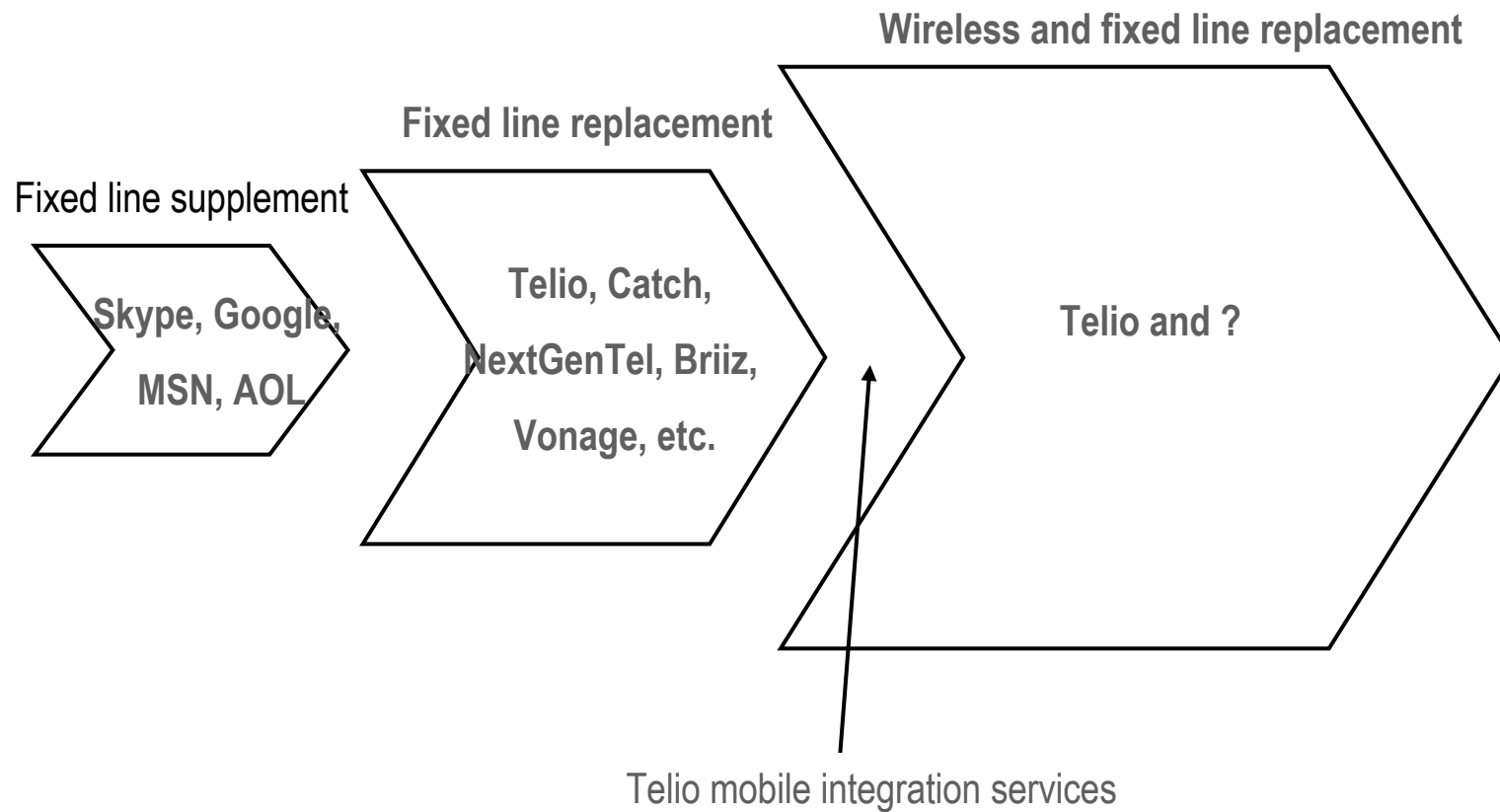
The relative competitiveness of access independent VoIP providers is enhanced

The separation of access and service is “built into the genes”

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VoIP industry road map



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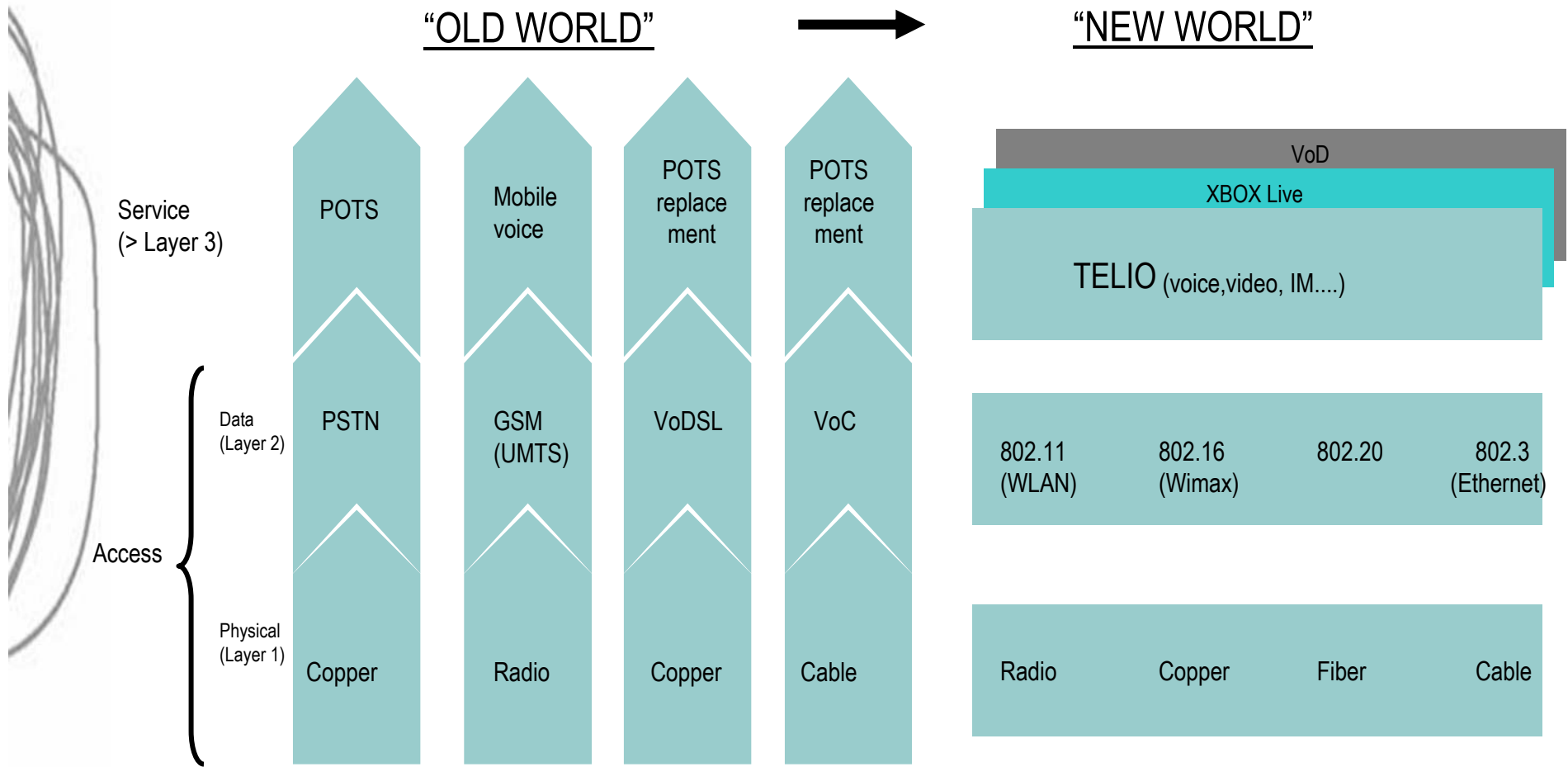
The inherent multimodality of IP = **complete** deregulation of last mile

- A broadband IP access is multimodal. It is this *intrinsic* feature that make IP so attractive
 - Voice is **just a mode of content**, like gaming, chat, news.....
 - ... and customers will use the multimodal IP access for multimodal tasks – www.telio.no, www.vg.no, www.nrk.no, www.spill.no, www.msn.no, e.t.c.

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Internet changes everything - Horizontal layer unbundling





Technologydriven separation of access, transport and service is not new!

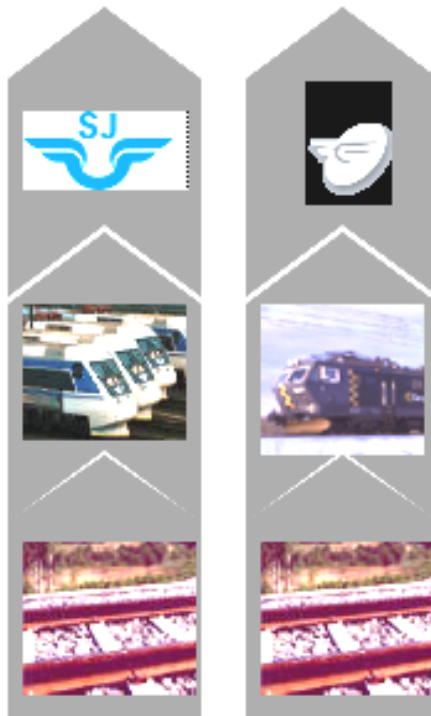


"OLD WORLD"



"NEW WORLD"

Service layer



Transport layer

Physical layer



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What does a VoIP user need to make and receive voice calls ?

- No phone network → • The internet is the network
- No telephony service → • If terminals know each other IP-adress, no middle-man needed
- No billing system → • No service = No billing

Therefore he does not need a Telco in the traditional sense .



It is not the apocalypse, but....

- Success in an “open” IP based world will come to those able to best define the natural role of a service provider.
- The natural role of a service provider will change and evolve over time !
- Customer loyalty must constantly be reearned
 - Being perceived as “fair” and “caring” is paramount
 - Maximizing ARPU may even destroy value !!!

Business

the

○ Being

● Cr

● Pr

○ Make

● Dr

○ “More



ELIO



wishful thinking”

for consumer.

“Better for less”



Business model revolution contd.

- Traditional telco model
 - Producing minutes and selling them with a margin
 - Main challenge : Ensuring that volumes is high enough to cover fixed costs
- Telio model
 - Issuing an option to the consumer to call for free/significantly cheaper
 - Main challenge
 - Product innovation and packaging to ensure attractive option pricing (for issuer and buyer)



Business model more similar to *derivatives* and *insurance* than traditional telecom



User experience evolution - not revolution

- Primary line substitution key to economic viability when “breaking out of cyberspace”
- Naked DSL prerequisite for VoIP as primary line substitution on copper due to ***number-portability***
 - 80-90 % of Telio customers with existing PSTN connection port their number
- “Plug and play” is absolute must to succeed in mass market
 - No particular operational challenges with VoIP on DSL. Operational challenges is on Layer 3 and 4, not Layer 1 and 2
 - Significant challenges - but also benefits - by delivering VoIP independent of accessprovider,
- ...but



Evolution also implies constant change

- Do **not** pause evolution after 1.step. VoIP is **not** only about POTS replacement.
 - Cheap POTS replacement is just the first “tip of the iceberg”
 - New valued added services can create stickiness long before they create stand alone profits
 - Access independence is technically challenging but enable benefits not possible in a “vertically integrated mindset”.



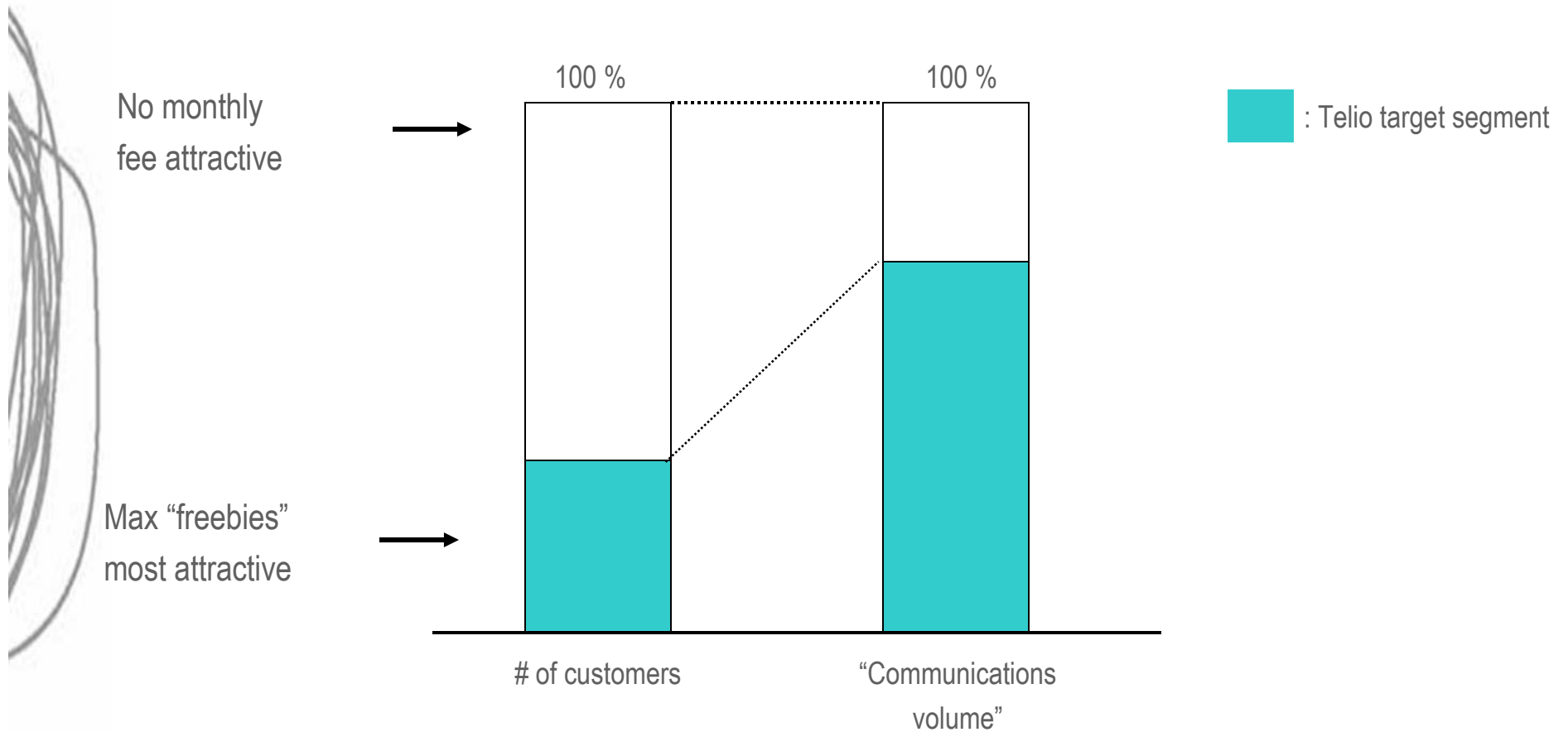
One size does *not* fit all

- Know **who** your target customers are !
 - If you try to be something for everyone, you risk being nothing to anyone
- POTS replacement demands very different business model from POTS supplement.
 - Telio probably carries more “Norwegian” VoIP minutes per *month* than Skype does per *year* !
- What constitute an attractive product for a “high volume” user may be very different than a “low volume” user.
- Most important product features for a “tech savvy” user will be very different a regular “Joe Doe”.

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Telio target group is “non-techie”, heavy users of communication services





Consumers seem to value our model....

- “Double digit” monthly growth for 15 months while profitable
- 2005 revenues estimated to 500 % of capital raised to date

More than 65000 customers in Norway and Denmark in just 18 months since launch!

- 47 mill. minutes per month estimated in September, an increase of 44 % since May 2005
- 60-70 % of residential VoIP market in Norway so far
- 4 times more VoIP customers than #2 and #3 DSL operators combined
- 40+ other VoIP companies in Norway with very limited success



Consumers DO care more about **what** they get at what price than who delivers it !

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Thank you for your attention!



The Economist

How the internet killed
the phone business

