LIBERTYGLOBAL

Horizontal vs Vertical Business Models

Münchner Kreis, 26 & 27 February 2007

Stephan Luiten, Director Public Policy

Horizontal Business Models





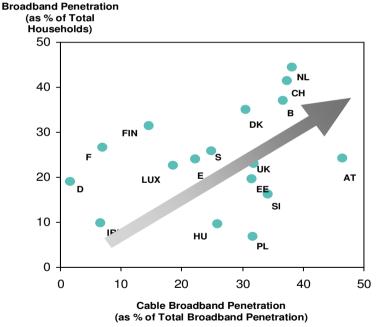


- Integrated business model (retail provider of triple play services over own infrastructure) is where the value of our business is based on
- The resulting infrastructure competition has accelerated innovation and penetration of broadband & DTV in countries with significant levels of cable consolidation
- It has allowed cable to become the only credible contender of telecoms dominance in the Digital Home space
- European market analyses procedures by NRAs have not led to structural separation of infrastructure & services being imposed on cable anywhere



Cable's role in driving innovation & competition

 In analogy to cable's role in driving broadband penetration in Europe, cable will also accelerate triple play competition for the Digital Home

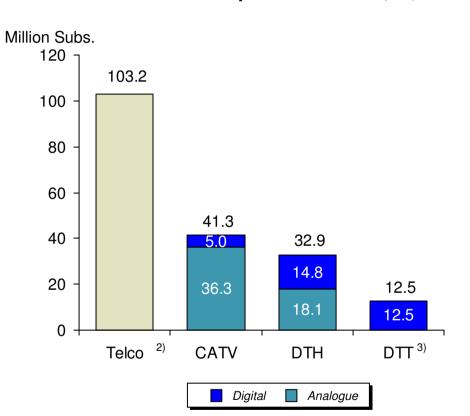


Broadband and Cable Broadband Penetration (Europe, 2004)

Sources: Screen Digest 2005, Booz Allen analysis



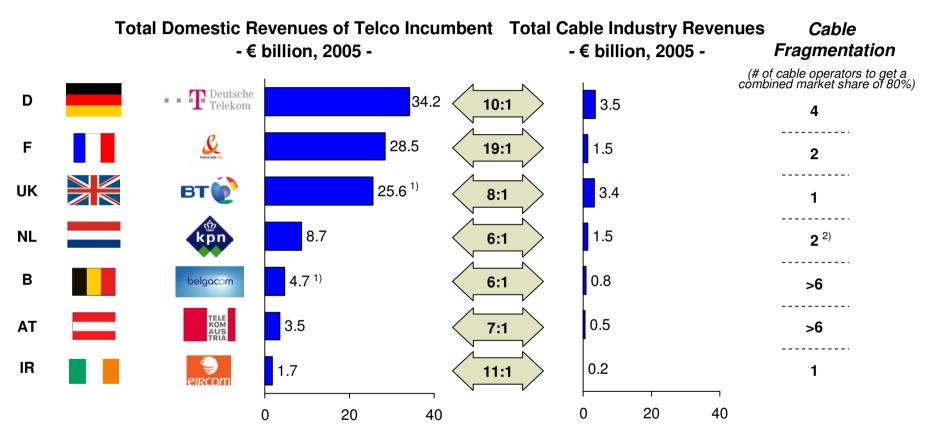
In the convergence space, cable is the only credible contender against telco dominance in Europe



Platform Subscribers - Selected Western European Countries¹⁾, m, 2005 -

- (1) Austria, Belgium, France, Germany, Ireland, Netherlands, and UK
- (2) Number for telco include only the incumbents' subscriber numbers
- (3) Digital Terrestrial Free TV
- Sources: Screendigest 2006, Dataxis, Booz Allen analysis

However, cable is disadvantaged compared to the much larger European telco incumbents



Notes: Revenue includes fixed telephony, mobile telephony, internet access and TV distribution

(1) 2005 domestic revenue for UK and B assumed to be the same ratio from total as in 2004

(2) Dutch competitive landscape after the merger of Casema, Essent and Multikabel in summer 2006

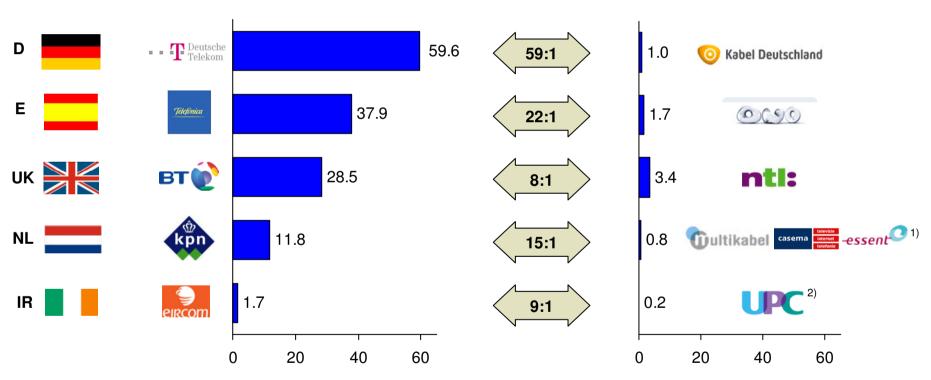
Sources: ABN Amro 2005, Screen Digest 2005, Annual Reports, Booz Allen analysis



Comparing telco incumbent with individual cable operators shows an even stronger imbalance

Telco Incumbent

Total Revenue Comparison - € billion, 2005 -



Largest Cable Operator

(1) Dutch competitive landscape after the merger of Essent, Casema and Multikabel in summer 2006 (2) Chorus and NTL merger in December 2005

Sources: ABN Amro 2005, Annual Reports, Booz Allen analysis



Horizontal Business Models



 Going forward, the prospect of infrastructure competition between NGNs remains firm and realistic



- Significant NGN investments will not be made if network operators will be reduced to 'dumb pipes': a tough declining margin business
- LGI will be looking for strategic partnerships* with OTT providers to enhance application development & time to market of innovative broadband services: `Managed Pipe'

* Google stated its interest in teaming up with cable to help customize user viewing over TV networks. "*Rather than replacing traditional distribution, we think [OTV] can make traditional TV distribution stronger.* "In other words, Google wants to be a leader in video search, not become a video distributor to end-users.

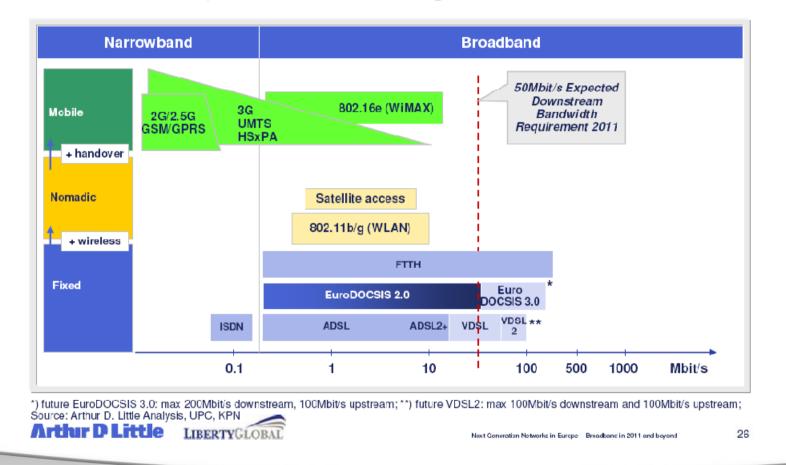


NGN Infrastructure Competition

The Concept of Next Generation Networks



There is ample availability of different Broadband technologies which cover all aspects of Broadband usage





Share of NGN Technologies

Next Generation Broadband Market Development – Subscribers & Penetration



In a market environment with sufficient access competition, DSL (>50%) will remain the dominant technology in W-Europe, cable will increase slightly while FTTH will reach at most 13% share in Sweden and Norway only

	DSL	■ HFC	■ FTTI	H 🗆 O	ther		Comment
Austria	E2011 E2008						 Germany and France will be dominated by more than 80° DSL subscribers and HFC share will remain below 15%
Netherlands	E2011 E2008 2005						 Sweden will have the highest FTTH share with 13% in 2011 Norway is expected to take up 10% FTTH share mostly a
France	E2011 E2008 2005						 Notway is expected to take up 10% PTTH share mostly a the expense of DSL Switzerland retains the same market share for HFC
Switzerland	E2011 E2008 2005						 Other technologies include satellite and fixed wireless access
Sweden	E2011 E2008 2005 E2011						Switzerland: "We expect penetration to grow to 80% to 90% on long terms. Of course we regularly discuss footprint expansion although the gap to the incumbent will
Germany	E2008 2005 E2011						 always remain" Swiss industry expert Austria: "Mobile may take up to a third in 2011 but FTTH will only play a minor role. HFC may reach 20% and DSL
UK	E2008 2005 E2011						 around 40%" Austrian industry expert Austria has seen strong DSL growth in 2005 and will
	E2008 2005	T	1	1			further increase its DSL as growth is mainly coming from rural and thus DSL dominated regions
uraa: Dranziat	0%	20%	40%	60%	80%	100%	
urce: Propriet		1 (1) (1) (1) (1)	RTYGLO				Next Generation Networks in Europe – Broadband in 2011 and beyond

Vertical Business Models



 Chellomedia produces niche digital channels, interactive and on-demand applications & aggregation of content (rights)

 Originally, Chellomedia's *Digital Media Centre* was established to support UPC's DTV roll out as the first digital play-out centre in Europe





Chellomedia's business model is based on nonexclusivity

- Chellomedia content & applications are wholesaled to all distribution platforms
- Profitable as this activity may be, it does not fundamentally strengthen our negotiating position visà-vis the owners of `must have' content:
 - Public service broadcasters
 - Film studios
 - Sports rights owners
 - International thematic channels

Cable is subject to unharmonised `must carry' obligations across Europe

