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The Pros and Cons of Rolling-Out FTTB: The Perspective of Regional Telecom Operator NetCologne

NetCologne: Company Background and Status of Fiber Roll-Out

NetCologne was founded in 1994 as regional telecommunications provider in Cologne, Germany, a city of about one million inhabitants. Since its foundation, it has directly connected building with its own network in order to achieve independence from the ex-monopolist Deutsche Telekom AG (DTAG). Today, NetCologne owns a fiber network (FTTC and FTTB) and a cable network (HFC). Positioning itself as full service provider for private and business customers, its business portfolio for private customers encompasses fix and mobile telephony, Internet access, and cable TV. To its business customers, it additionally provides data services and corporate networks. Its DSL market share reaches more than 50% in the city of Cologne, and more than 36% in the region (number 2 after DTAG). From the beginning, it has been NetCologne's mission to operate its own network. After three years of preparation (not being certain how exactly the legal framework would change), with the liberalization in 1998, NetCologne brought an FTTC network to the market, through which it has offered a bandwidth of 6-18 Mbit/s via ADSL2+. With the upcoming shift to VDSL, NetCologne will provide up to 50 Mbit/s via FTTC. In 2006, NetCologne then started to complement its FTTC network with FTTB, offering not only 6 Mbit/s to 18 Mbit/s, but also 50 Mbit/s and 100 Mbit/s, and - upon customer request - 1 Gbit/s. By 2009, it had connected almost 30% of all apartment buildings in Cologne with FTTB. Finally, with its HFC network using EuroDOCSIS 3.0, NetCologne supplied 6-, 10-, 20-, 30-, 50- or 100 Mbit/s to another 10,000 buildings in the city of Cologne. Taking FTTB and HFC together, NetCologne connects 236,000 of all 532,000 Cologne households with up to 100 Mbit/s bandwidth.

Theoretical Grounding and Research Approach

For analyzing the pros and cons of rolling out FTTB from the perspective of NetCologne, we find it valuable to take the perspective of the resource based view and the framework of dynamic capabilities: according to the *resource-based view*, a company's competitive position results from processing a bundle of human and physical heterogeneously distributed and ideally 'unique' resources (Wernerfelt 1984; Barney 1986; Barney 1991), which a company manages for innovating and achieving a sustainable competitive advantage (Nelson, Winter 1982; Prahalad, Hamel 1990; Winter 1995). A company's *dynamic capabilities* to integrate and reconfigure internal and external resources and competences in order to accommodate rapidly changing environments drive the development and the deployment of the resources (Teece et al. 1997; Teece 2007). Especially a company's *technological capabilities*, which accumulate over time and with experience (Dierickx, Cool 1989), shape its business portfolio. Hence they are a prerequisite for sustaining competitive advantage (Anderson, Tushman 1990).

Harking back to those theoretical grounds, in this work we use a single case study (Eisenhardt 1989; Eisenhardt, Graebner 2007; Yin 2009) of NetCologne to investigate its situation and prospects with regard to a sustainable FTTB roll-out. We collected our data during seven in-depth interviews with company managers and another five in-depth interviews with external insiders. We complemented our interview data with gathering insights from publicly available, printed or downloadable documents.

Findings and Outlook

So far, the FTTB-roll-out prominently positioned NetCologne, both in Cologne and in the German telecommunications market, while a- as widely experienced - it has barely led to higher revenues on the private market (e.g., FTTH-Council-Europe 2010; VATM 2010). Private customers may be hesitant to pay more than today for more bandwidth if their most popular applications (eMail, social networking or online shopping) work well on copper-based DSL lines.

Our analysis shows that FTTB roll-out makes sense for NetCologne as a regional provider, in spite of limited demand for broadband services, ongoing regulation uncertainty, scarily low end-consumer prices with strong price competition, and reiterated statements that broadband is just a commodity or that 'Content is King'. However, we also point to the need for NetCologne to rearrange its resources to stay competitive. We organize our discussion of possibilities to maintain or even increase Net Cologne' profitability along three lines (1) content based activities as an option for broadening the business portfolio, (2) stronger focus on open access, or (3) merger and acquisitions. We pay particular attention to the market peculiarities relevant to NetCologne. Thus we would like to foster the discussion on how large scale, homogeneously organized telecommunication stakeholders (providers, regulators, customers) need to operate.

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