

Management Summary

The telecommunications sector is facing major challenges. The migration from legacy telecom services based on the copper or coaxial infrastructure to the superfast next generation fibre optical access networks requires huge investments. Transition to the new architecture is driven by the constant growth of internet bandwidth, new innovative services, new business models and digitalization of legacy services.

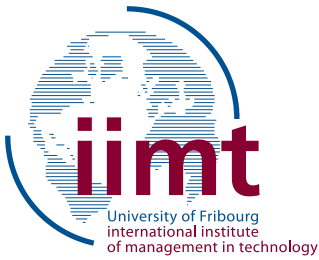
Due to the uncertainty related to the potential regulation or suitable business models for the new networks, potential investors, market players and end-users are unsure what would be the right thing to do. The conditions for a successful business model for the new infrastructure and services are highly country- and region specific and thus the experiences gained in other countries are very difficult to replicate directly in Switzerland. Factors like customer density, ARPU potential, cost of capital, construction and operating costs have to be modelled and applied on the regional level to draw conclusions of the potential feasibility.

Asia and other emerging economic areas have taken globally a head start in building fibre networks, mainly driven by the new competitive telecom operators. Many emerging economies in Eastern Europe and Asia who decide to rebuild their national broadband infrastructure, decide frequently to skip copper and to go directly for the next generation fibre to the home (FTTH) networks. In contrary; in developed economies with adequate broadband coverage the incumbents often tend to promote the lifetime extension of their legacy copper access networks based on xDSL technologies. In Switzerland the nationwide FTTH discussion and projects were triggered by the municipal electricity utilities, who started to construct and market actively their fibre networks and new innovative services in the major Swiss cities.

Swisscom, utility companies and the Swiss telecoms regulator ComCom have agreed on the standard co-operation model to ensure technical interoperability and to avoid duplication of physical or cable infrastructure. Construction activities have started in many of the Swiss biggest cities and municipalities. Priorities are driven by the customer densities, i.e. the largest cities and surrounding agglomerations will be connected in the coming 5 to 10 years. Rural areas present a challenge due to considerably higher construction costs and lower revenue potential. Based on a demographic and economic model of WIK-Consulting, a case study for the region of Dielsdorf indicates the maximal feasible coverage of about 50% of the municipalities and 60% of the rural population with the next generation fibre networks.

With an aim to understand the optimization potential of the rural FTTH business model, the demographic facts of the Dielsdorf region and economic models of WIK-Consulting are combined into an economic model. Variation of the model parameters (Costs, ARPU, ARPU margin, WACC and market share) gives indication about the most critical success factors for the business model and demonstrates that a positive net present value can be achieved over the investment period of 20 years for full FTTH coverage of the Dielsdorf region. Furthermore, the key elements to enhance the business model are presented and analysed: reduction of costs, increasing the ARPU or take-up of services.

Structure of FTTH value chain and specifically of Swisscom, as currently vertically integrated player on all layers of the FTTH value chain, is analysed based on the business model pattern “unbundled corporation”. The pattern suggests that decoupling incumbent telco providers in manageable actors, e.g. network building & operations, service & product



innovation and management of the customer relationship, could considerably increase the operational efficiency and speed of innovation through collaboration in new business models.

Main players in the rural FTTH game are Swisscom and municipal utility providers. To be successful, the future actors in the FTTH value chain need to identify their core focus and reconsider their business models and vertical integration strategy. New “multisided”, “free” and “open” business models open up business opportunities for advertising-funded, free or premium services and provide a network platform attracting both customers and innovative service providers. Municipalities in rural regions should motivate their utility providers to seek active co-operation with Swisscom to make the rural FTTH networks happen.

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