

# Swisscom

## Quick off the blocks with 5G

With the highest broadband penetration in the OECD, Switzerland's telecommunications sector is mature, sophisticated, and competitive. But with agile, disruptive MVNOs and OTT companies stepping onto the ICT playing field, major players like Swisscom can't rely on yesterday's successes. And the Swiss incumbent doesn't intend to, according to CTIO Heinz Herren – his ambitions are clear when it comes to network upgrades, Swisscom's internal digital transformation, and 5G deployment.

By Gary Maidment





## Fixed on 2021

**H**aving already invested around 1.75 billion Swiss francs (US\$1.85 billion) in network expansion, Swisscom aims to continue its strong investment momentum by modernizing its fixed broadband network by the end of 2021. The scheme involves three major features, the first of which is internal transformation. “We’re starting by preparing our cloud infrastructure to be ready to take on NFV transformation,” says Herren. “This year, 20 percent of our networking functions will go into the cloud.” The software-based nature of Network Functions Virtualization (NFV) delivers a slew of advantages for carriers, including lower CAPEX and OPEX, faster TTM, better scalability, and reduced vendor lock-in – benefits that can in turn easily be passed on to customers.

The second feature involves renovating its IP transport network to prepare for the future

traffic loads that its wireline network will carry. The third and according to Herren, most important feature, is boosting the operator’s network access technologies, “By 2021, all commonalities will get ultra-broadband with at least 80 Mbps, but we’ll go up to 500 Mbps using G.Fast technology.” Offering speeds of between 150 Mbps and 1 Gbps, G.Fast overcomes the notoriously expensive last-mile transmission associated with FTTH by connecting multiple subscribers from up to 300 meters using a fiber node, which serves as a distribution point in the form of a DSLAM (DSL access multiplexer) node.

For Swiss people, these upgrades will level the playing field with the 1 Gbps FTTH speeds that one-third of Switzerland currently receives, be capable of providing more demanding services like high-res video, and meet increasing data needs because, says Herren, “in multi-user, multi-family environments at your home or business, you’ll need much, much higher Internet base speeds.”



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## Ears open to the customer

Swisscom is teaming up with Huawei to construct its IP transport network, continuing a decade-long partnership that began with the two companies building the operator’s optical backbone network. More recently, the partners completed a four-year G.Fast project that kicked off in 2012 and made Swisscom the first operator to deploy G.Fast in Europe. In addition to Huawei’s proven R&D and tech credentials, Herren also mentions the Chinese company’s “willingness to really listen to customer demands,” something that’s more important than ever in today’s climate of telco disruption and transformation – a climate that requires long-term strategic partners to ensure new business goals can be met.

According to Martin Creaner, Huawei consultant and author of *Delivering the Digital Economy*, digital transformation for telcos must tick three main boxes on the way to ten possible transformation destinations. “First, transformation must significantly improve the B2B and B2C customer experience if telcos wish to compete with OTT players. Second, transformation needs to meaningfully boost

a telco’s efficiency and agility. And third, it must enable them to maximize revenue from both traditional and new digital services.”

## Know where you’re heading

“Our DX agenda is very intense,” says Herren on the subject. However, one advantage that the Swiss operator has is its existing forays into the IT field, “We’re also an ICT provider, so we offer some IT services to the Swiss market. And as part of that, digital transformation for us means being prepared to go into virtual environments of your own,” he states, referring to Swisscom’s NFV deployment plans. Nevertheless, that doesn’t mean neglecting your telco roots even, as Herren concedes, if your “traditional telecommunications business is stable or even shrinking...We need to make sure that we still try to grow that telco core.”

For an operator with 20,000 employees, including more than 2,500 in its other major market of Italy, a change in mindset is one of the biggest challenges required for the telco to overcome its legacy ways of working, “It’s not so much a technology challenge, honestly, you have to have the right technology in place, but

you must ensure that the style you manage the company, the way you lead the company into agile operations, into DevOps, into digital worlds can also cope with the speed of how you transform.” says Herren. “You have to adapt very quickly to the new way of working. The OTT companies show us how quickly, how strong they are in going to market.”

## High five

Digital transformation and network modernization schemes are enablers for the 5G climate to flourish. “We announced last week [Feb 2018] that we’ll be launching 5G this year by Q4. We’ve done intensive proof of concept over the last two years, so I think we’re ready to launch,” says Herren. “By using a lot of virtualization techniques, by using a lot of cloud infrastructure, I’m pretty sure that we can even decrease the complexity of 5G network architecture.” He goes on to talk about the advantages of virtualization in 5G architecture, “It allows you to run multiple instances on the same infrastructures, you can easily think about much more resilience, much more redundancy, in offering 5G data services.”

In the Swiss market, he predicts that the B2B opportunities for 5G will first be seen in the banking, chemical, and manufacturing industries, the verticals he feels will realize large initial gains from low latency and higher bandwidth, especially when combined with edge computing. Herren also believes that network slicing will deliver opportunities for Swisscom, letting the operator more fully utilize its infrastructure. “By using the same network topology and infrastructure, we can have some virtual slices offering very



different network types. One network could be for an alarm company that needs to rent some alarm services, another can be for the railway companies controlling their own railway system, there could be some mobile broadband data services, there could be some services with very low latency for gamers or drone applications,” he says.

While Herren admits that the complexity of 5G architecture is still uncertain, he’s bullish about its transformative power, “If you really combine everything together, the way you manage data on the network, the way you help customers to optimize their use of service by using AI and machine-learning algorithms, the way IoT will need constant connectivity, the way you have to have security services around the millions of sensors connected to the networks, the way 5G will fundamentally transform industry, there will be a lot of opportunities for telecom operators.”

To ensure Swisscom is front and center when it comes to grasping these opportunities, the operator is proving that it’s quick off the blocks with transformation, network upgrades, and 5G. [www.swisscom.ch](#)