Public Fiber Network versus Private Operators

Pascal Grieder | April 2019

What is Fiber and why is it public?

Terminology and Starting Point in Switzerland

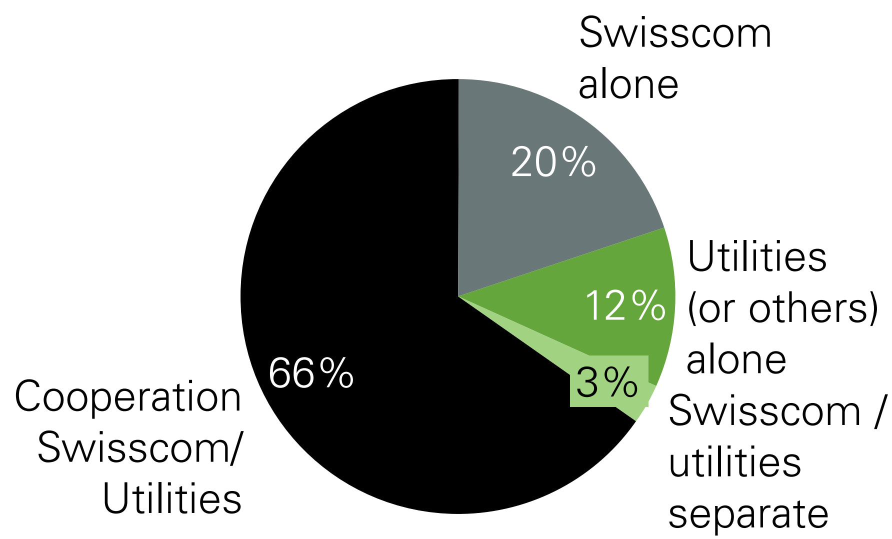
Salt.

What is Fiber?

- Fiber is a «glass cable» able to transmit ultra-high bandwidth data
- Fiber to the Home (FTTH) implies that the cable goes all the way into the home, ensuring maximum speeds
- All other approaches such as «Fiber to the Street» still rely on a copper line for the last meters to the house

Why is Fiber Public?

Breakdown of 1,698M FTTH units



Swisscom and the utilities own and operate almost all of the deployed fiber in Switzerland

Source: Swiss Fiber Net, 2.2019

Salt.

Why is Fiber to the home so sexy?

Fiber to the Home provides 50x speed at one third of the price versus other technologies

	Competitors		Salt Fiber
Internet Speed	200 Mbps	50x	10,000 Mbps
TV channels	> 250		> 250
Telephony	Unlimited calls to CH		Unlimited calls to CH
Monthly Fee	CHF 120	÷3	CHF 39.95*

* for Salt Mobile customers, else CHF 49.95

Salt.

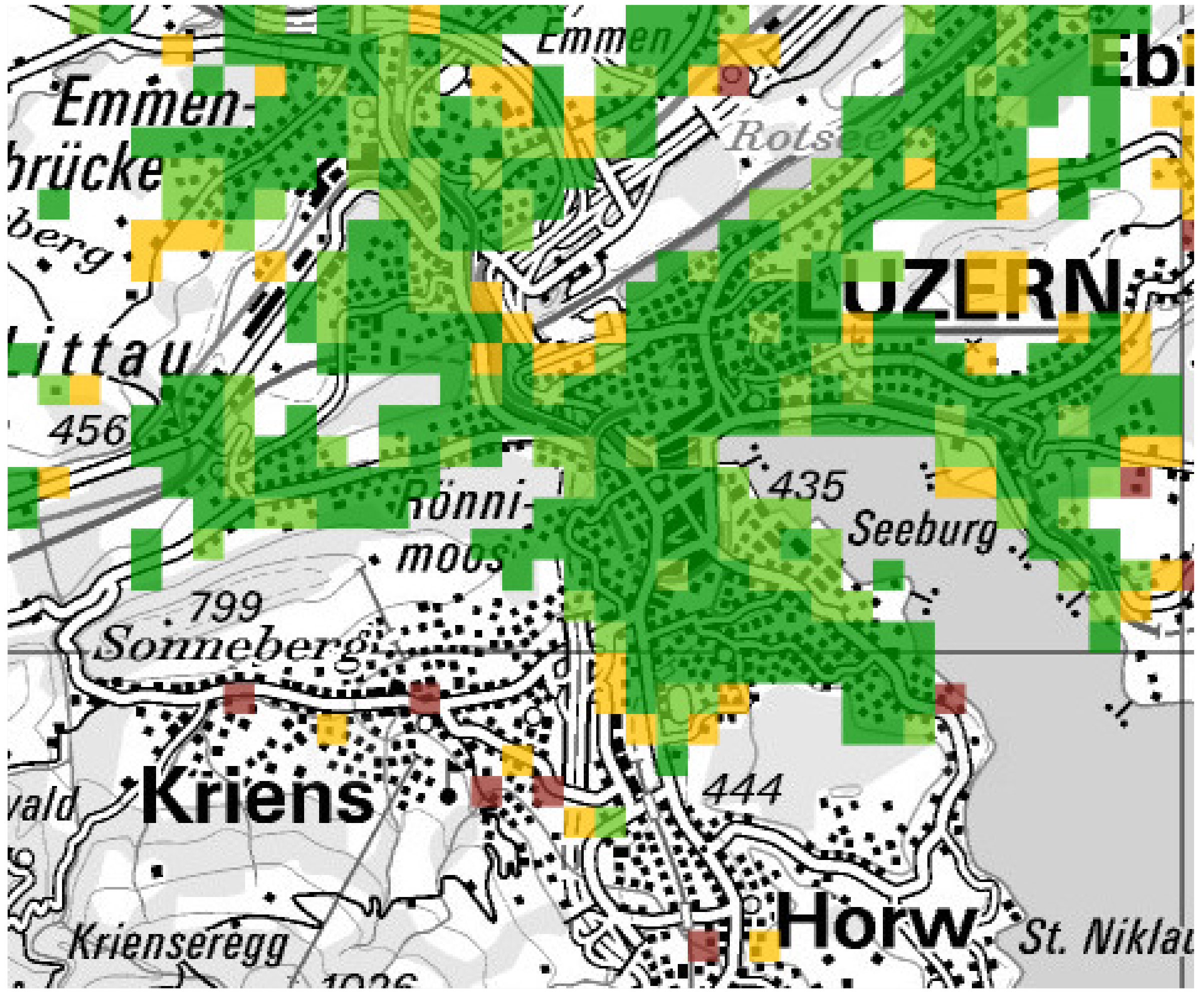
How can there be such a huge gap?
Is Fiber cheaper to build?

Luzern / Kriens
both highly urban cities with high population density

Kriens with older hybrid network

Luzern with brand-new FTTH in place

Unclear how brand new infrastructure can lead to 3x the price of written off old network



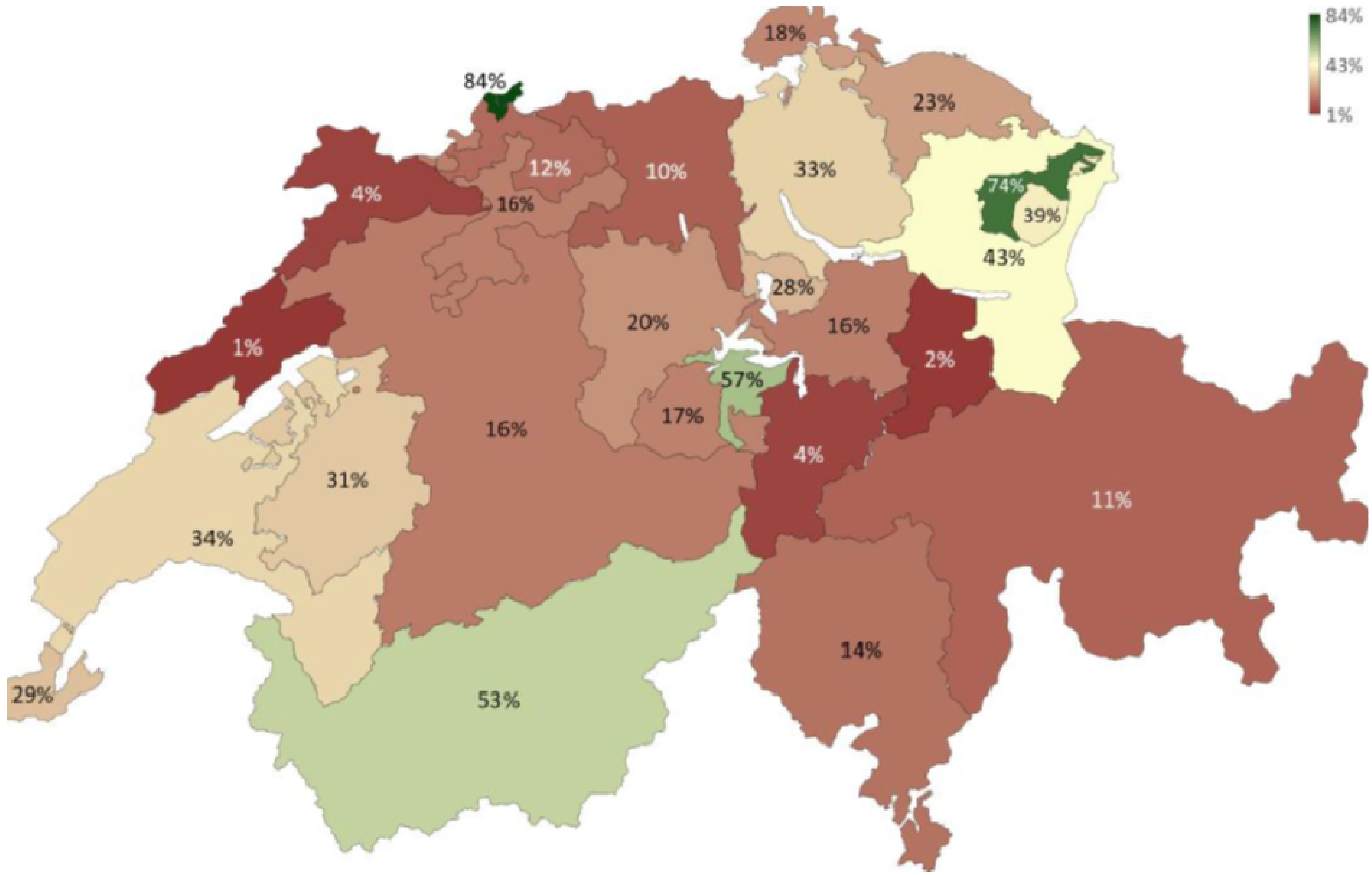
Salt.

FTTH coverage in Switzerland is clearly not driven by geography or population density

FTTH Coverage per canton

Highest coverage in BS, AR, NW,VS

Lowest coverage in NE, GL, JU, UR

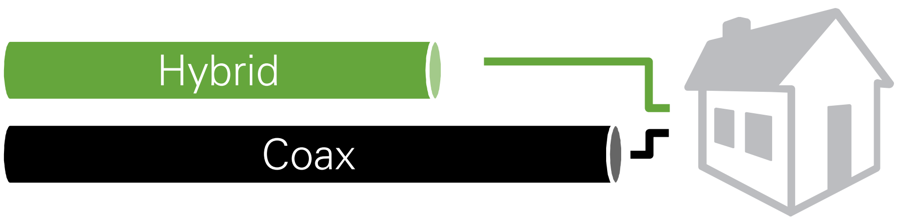


Salt.

Wholesale access   No wholesale access

How can there be such a huge gap?
Is it related to competitive intensity?

Kriens
(Wholesale Monopoly)



Coax technology of cable players not suited for wholesale and multi-carrier setup

Hybrid technology with «Fiber to the curb» means there is only one single vendor for wholesale access on the market: *Swisscom*

Luzern
(Wholesale Competition)

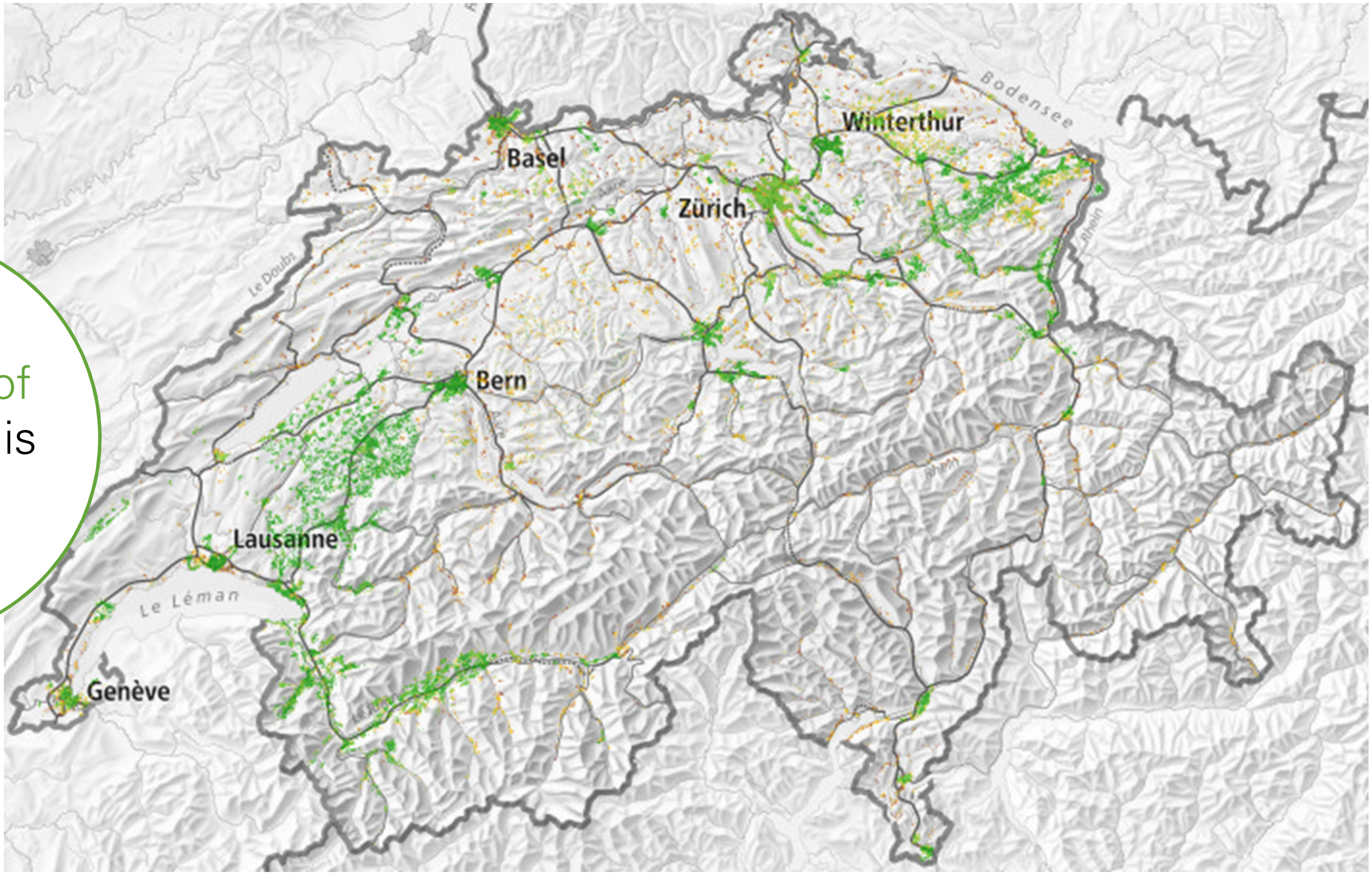
Due to cooperative 4-phase model that was introduced in 2012 there are always 2 different vendors for wholesale services on the market with FTTH

Competition leads to lower prices for the consumer

Salt.

If FTTH is so great, can we assume Switzerland is leading?

Today around 1/3 of Switzerland is covered by FTTH



Surely other countries face similar challenges as Switzerland?
In fact, Switzerland is falling behind

FTTH Coverage of Selected Cantons in CH and in other European Countries

in Prozent

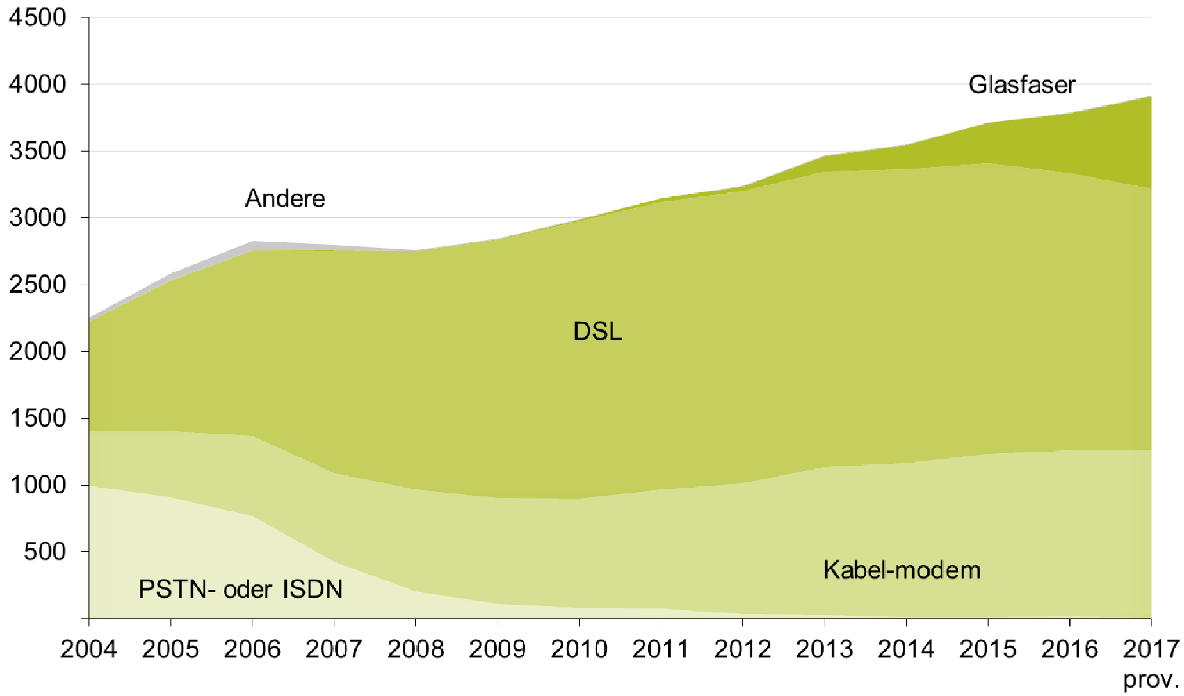
Source: IHS Markit, 2018

Salt.

Unless dramatic changes will take place the FTTH footprint will not change significantly in the next 5 years

Highspeed on "Fiber"

Number of internet users by connection technology
in Thousands



- End of April 2018 over 3,3 Mio. Fixed net connections were connected with "fiber"
- However, focus especially of Swisscom is on FTTS (fiber to the street) which does not create competition
- Selective trials and deployment of GPON which does not create competition

Source: BAKOM

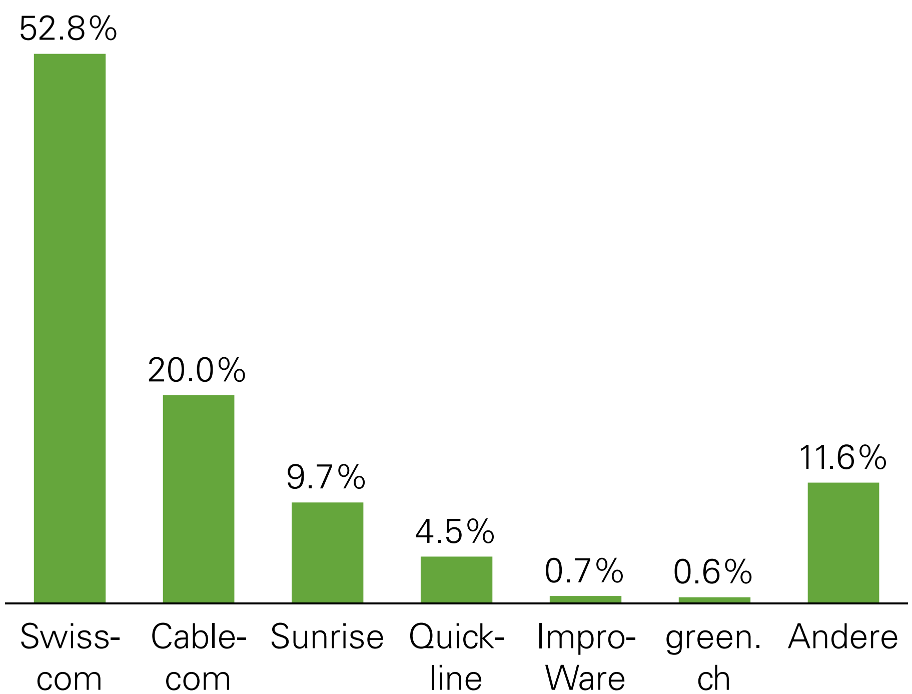
So why is there not more FTTH being built?

Salt.

Why are Salt or Sunrise not building FTTH?

Low market shares of attackers

Market share of broadband internet accesses



Difficult to recap investment

If only ~ 3 out of 10 households in footprint are acquired, economics of investment do not add up

Source: Source: OFCOM 2016

Salt.

Why are utilities not building more FTTH?

Many utilities have deployed fiber …

…and have an incentive to continue, due to smart meter requirements

… but always in cooperation with Swisscom

ewz

ewb

iwb

ewl

SIG

Swiss Parliament and citizens voted for a new energy law in 2017, within which, communes & power utilities are pushed to install smart metering solutions (80% of coverage by 2027).

Swisscom bet on wireless IOT services for that but fibre is also an alternative.

Clear synergies in fiber rollout to serve future needs of both power and telco services

As Swisscom has stopped FTTH rollout, this forces utilities to stop as well.

Salt.

Why are infrastructure companies not building more FTTH?

Independent companies gaining traction …	… but deployment typically delayed by 1 - 3 years due to political hurdles

Independent infrastructure companies are deploying fiber.

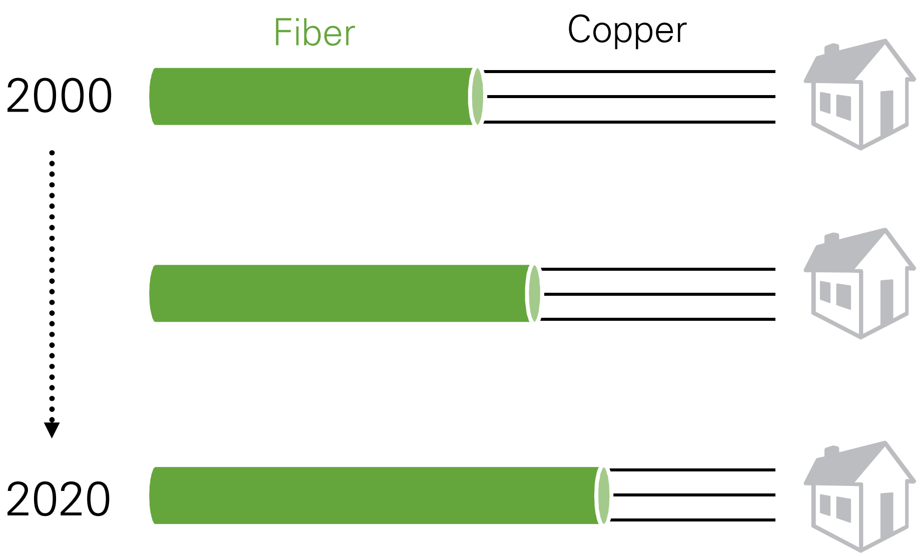
baden4net open fibre access chiasso4net open fibre access swiss4net open fibre access

Full wholesale access to all service provider under conditions that are comparable to areas with 4-phase fiber model

- Only utilities use sufficient duct capacity to deploy FTTH efficiently
- The ducts themselves are often owned by the commune and only operated by the utility
- This creates a very complex stakeholder setup as communes and sometimes even population need to approve access

Why is Swisscom not doing more FTTH?

Proximity of fiber to the home



Why not accelerate FTTH directly?

Cost: cheaper to keep last meters to house on copper

Revenue: By keeping copper you reduce wholesale competition and ensure higher price levels

Salt.

So what would it take to change the status quo?

Salt.

Solution 1:

Even the playing field across technologies – Regulate access for non-FTTH to ensure fair consumer pricing

Reasonable request…

« Access to lower cost hybrid networks must be provided at least on equal term as for FTTH »

… but Parliament removed the ability even to "ask" for next 3 years

- Revision proposal was supported by
  - ComCom and OFCOM
  - Federal council
  - Monsieur Prix
  - All major players in the Swiss telco industry (except Swisscom)
- Revision declined by parliament in 2018

Avenue closed for at least next 3 years

Salt.

Solution 2:

Make it easier to build FTTH – Provide "free" access to ducts in exchange for FTTH deployment

Example Baden

- Baden4net was created to deploy FTTH in Baden once duct access was granted
- Swiss4net which is behind that approach take care of everything needed from the invest-ment to the deployment of the infrastructure
- Infra-players provide competitive wholesale access to all service providers, leading to increased competition

… but deployment typically delayed by 1 - 3 years due to political hurdles

- Infrastructure funds well funded and keen to invest in Switzerland
- Prerequisite is easy access to utility ducts
  - Swisscom duct access regulated, but less suitable for 3rd party build
  - Utility duct access not regulated
- Process for access is currently very slow due to complex stakeholder setup and fragmented utility landscape

Introduce regulation on "Ducts for FTTH" swap, i.e. force easy access to old utility ducts if people are willing to deploy FTTH

Salt.

Solution 3:

Put pressure on natural owner of fixed line infrastructure – Swisscom needs to (re-)start building FTTH at a larger scale

swisscom

- Swisscom as natural «lead builder» due to more than 50% market share & superior economics
- Commercial incentives clearly stacked against FTTH, as current "regulatory vacation" creates incentive to cement monopolistic wholesale access

Public and political pressure required for Swisscom to resume FTTH buildout with 4-phase model

Sunrise

- In light of merger with UPC, Sunrise has taken a commitment on cable, reducing focus on FTTH
- In case Sunrise does deploy FTTH to replace older coax, access may be kept exclusive, i.e. monopolistic wholesale access may remain

Unlikely that Sunrise/UPC will play a leading role in increasing access competition through FTTH

Salt.

Solution 4:

Ensure rural areas are future-proof –
Create solidarity fund (e.g. like road infra) to support FTTH deployment

Example

DANET OBERWALLIS

- 70 communes in upper Valais founded DANET to build a fiber network that is owned by the communes
- Approach ensures that costs are spread equally between more rural and more urban regions
- As a result, everyone gets access to future proof FTTH technology at attractive prices

Solution required for long tail

- There will always be less urban regions where FTTH remains uneconomic
- Political action required to ensure these regions are not further disadvantaged
- Solidary actions like in Valais should be explored across cantons

✓ Appeal to politicians to enable solidarity investments to bring future technology also to suburban regions

Summary

To be able to provide revolutionary products to consumers we need the help of consumers and politicians to get the public enterprises and institutions to act

✗	✓	✓	✓
Regulate access to ensure fair consumer pricing	Make it easier to build FTTH – Regulated access to all utility ducts	Deploy more build capacity – Pressure on Swisscom to resume 4-phase FTTH buildout	Ensure rural areas are future-proof – Solidarity-Investments from cantons into suburban regions

Salt.

Thank you!

pascal.grieder@salt.ch