

Telenor Norway – Fixed broadband



Øystein Myrvold, Investment Director, Telenor Norway

London 2 June 2015

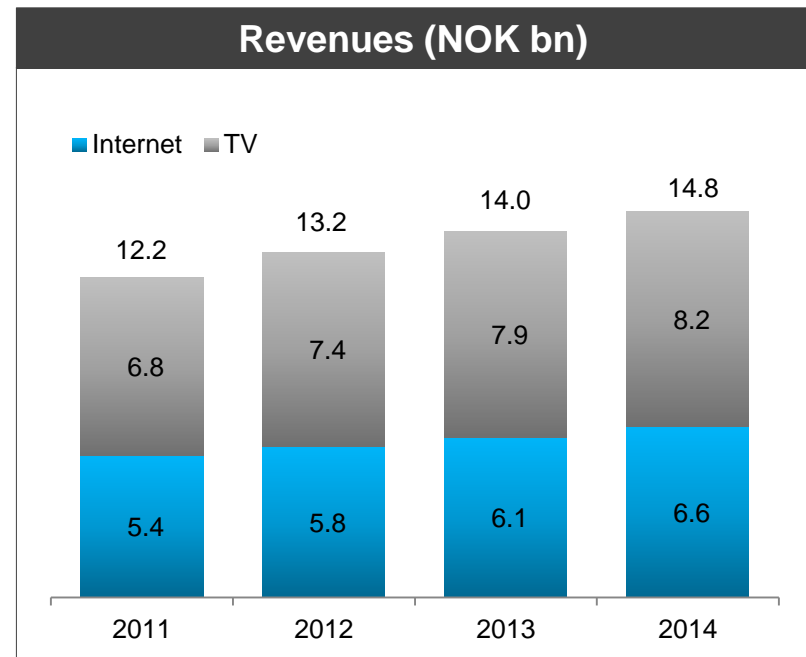
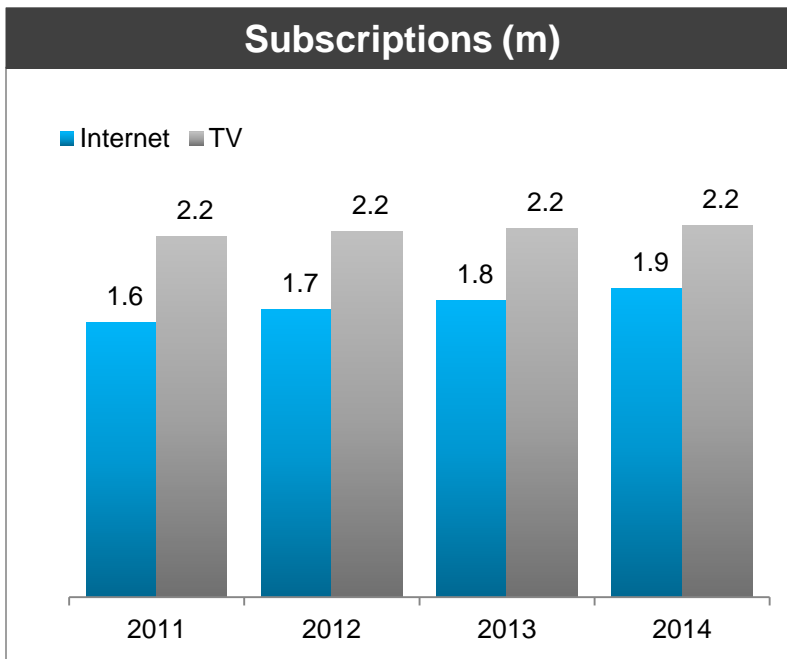


The Norwegian fixed Internet and TV market

- 2.35 million households
 - 63% living in single-dwelling units
 - 80% living in urban areas
- TV penetration close to 100%
- Fixed Internet penetration close to 80%
 - Around 10% so far not in demand
 - Around 10% under-served
- Market structure
 - Nation-wide DSL coverage
 - 2 large cable operators
 - 2 DTH players
 - More than 100 local fibre providers



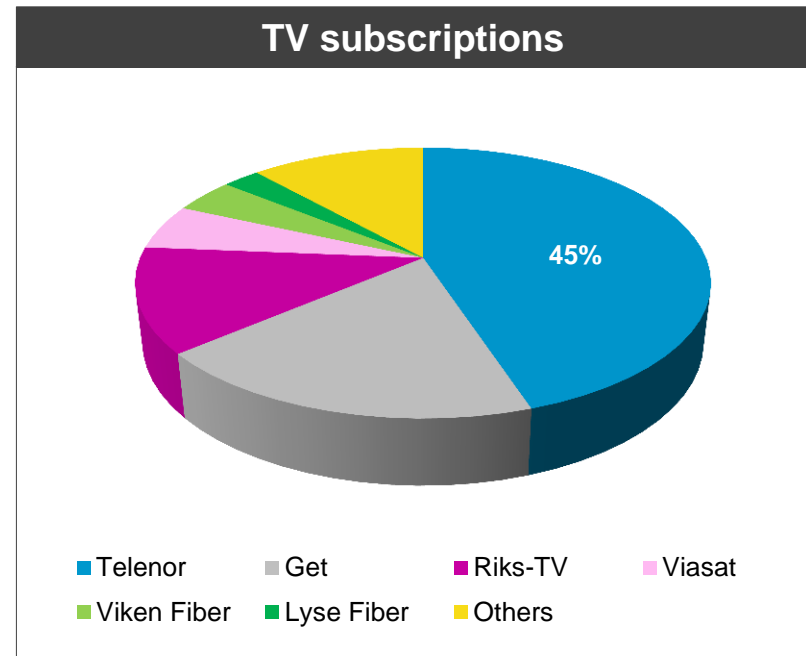
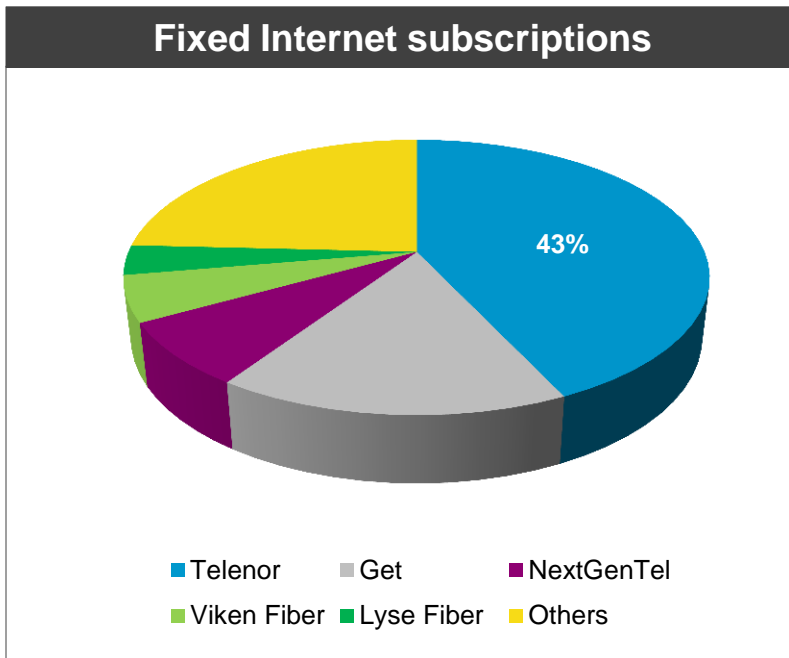
The market is still growing, despite high penetration



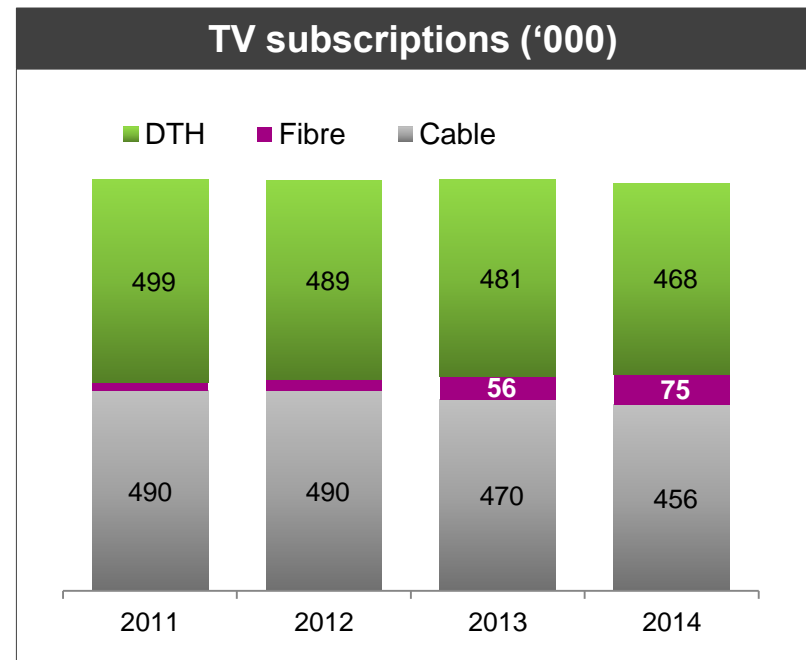
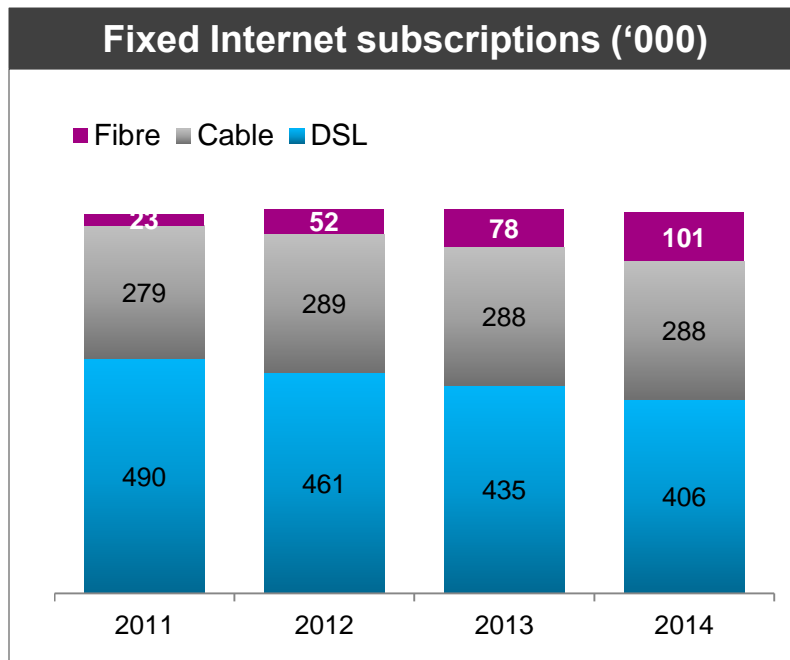
- 30-40k new homes built per year

- 6% avg. annual revenue growth 2011-2014

Telenor is the market leader in Norway within both fixed Internet and TV

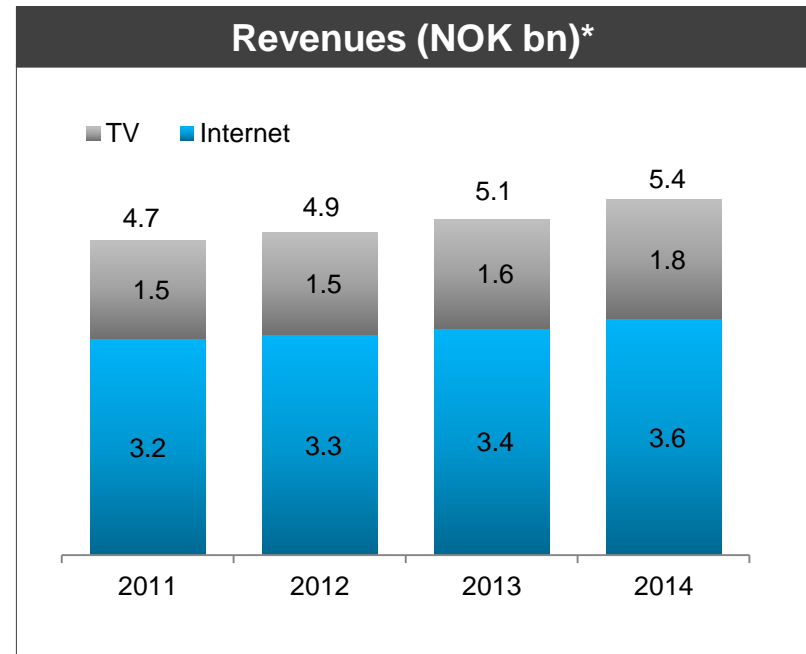
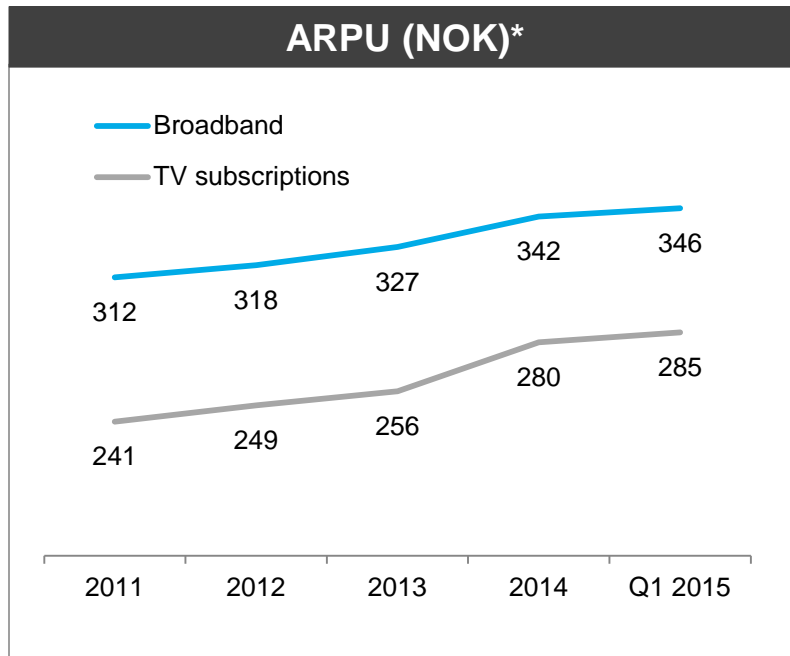


...serving the market across several technologies



In total, approx. 1 million revenue generating units (RGUs) excl DTH

Telenor Norway's fixed Internet and TV revenues grew by 6% in 2014, driven by increasing ARPU

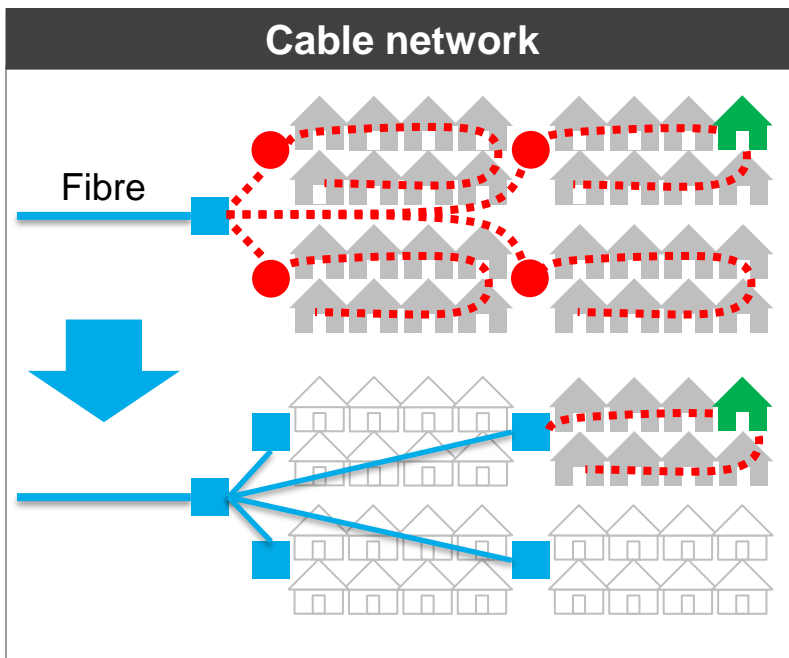


Fibre is getting closer to the customers

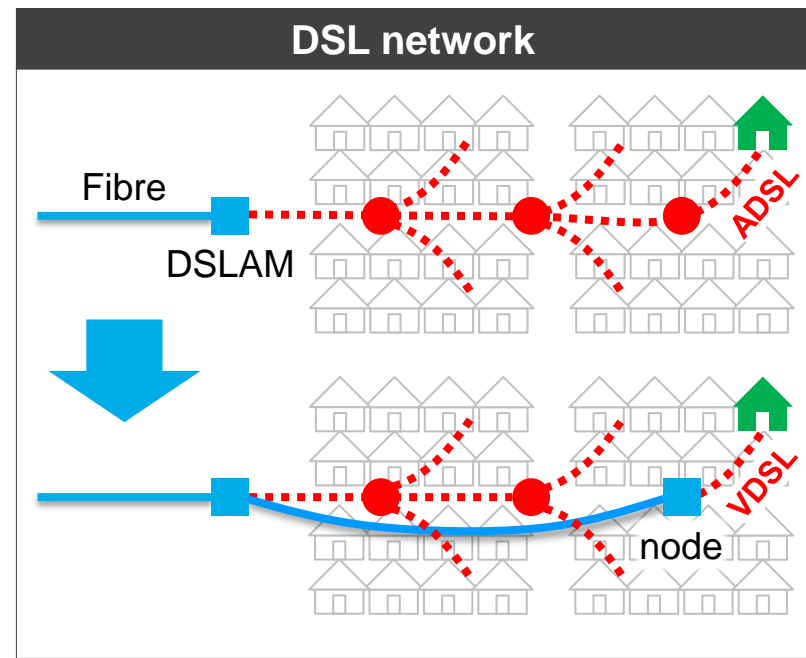
- Upgraded HFC, FTTC (VDSL) and FTTH will meet demand for capacity next 10 years by bringing transport network towards the edge
- FTTH will be the preferred technology in greenfield areas
- FTTH players will compete in areas with low-speed DSL and in areas with old HFC networks
- Upgraded HFC will compete with FTTH rollout



Increasing speed and capacity for cable and DSL by rolling out fibre closer to the customers



Rolling out more fibre to reduce the number of customers sharing the same segment of the cable network. Also implementing DOCSIS 3.1



Rolling out fibre-to-the-curb to reduce the length of the copper line to the home. Also evaluating vectoring

Our strategy to strengthen market leader position

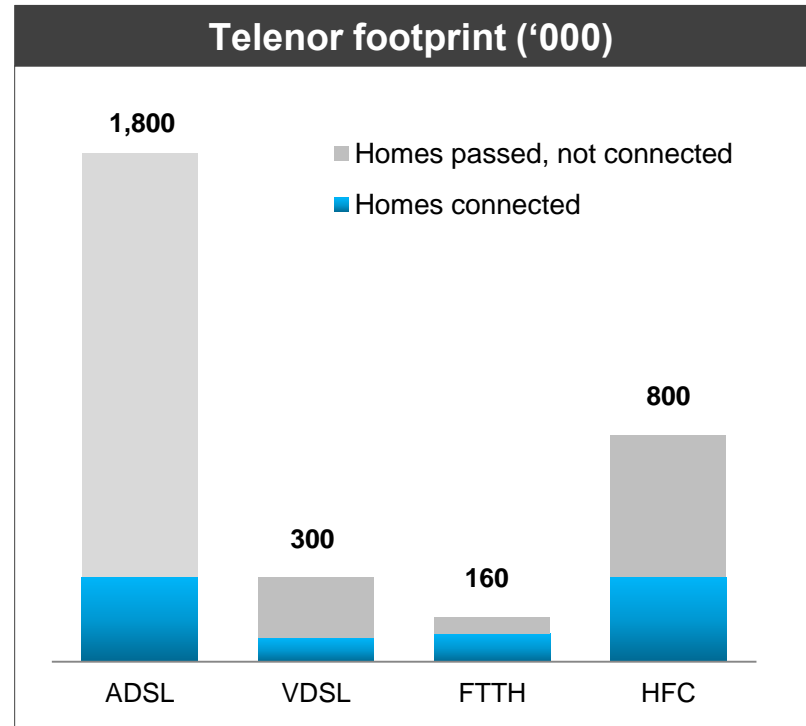
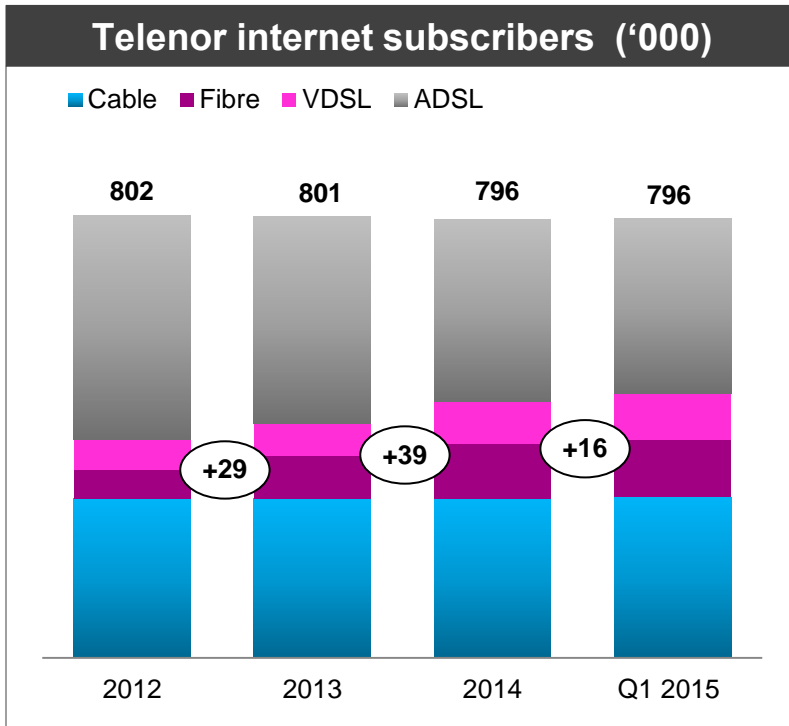
Grow subscribers on existing infrastructure

Cluster-driven rollout, leveraging multiple technologies

Increase ARPU on existing customers



We have been upgrading our access network and have significant untapped potential on existing infrastructure



Good profitability on FTTH and FTTC rollout

FTTH case (single-dwelling)

- Installation capex NOK 30,000
- Installation fee NOK 2,000
- Recurring:
 - ARPU NOK 700
 - EBITDA NOK 400
- Payback 5.5 years

FTTC case (single-dwelling)

- Installation capex NOK 7,000
- No installation fee
- Recurring:
 - ARPU NOK 430
 - EBITDA NOK 230
- Payback 2.5 years

New cluster-based approach improves capex efficiency and customer experience

From business unit focus ...

... to regional focus ...

... at the municipality level

Mobile rollout

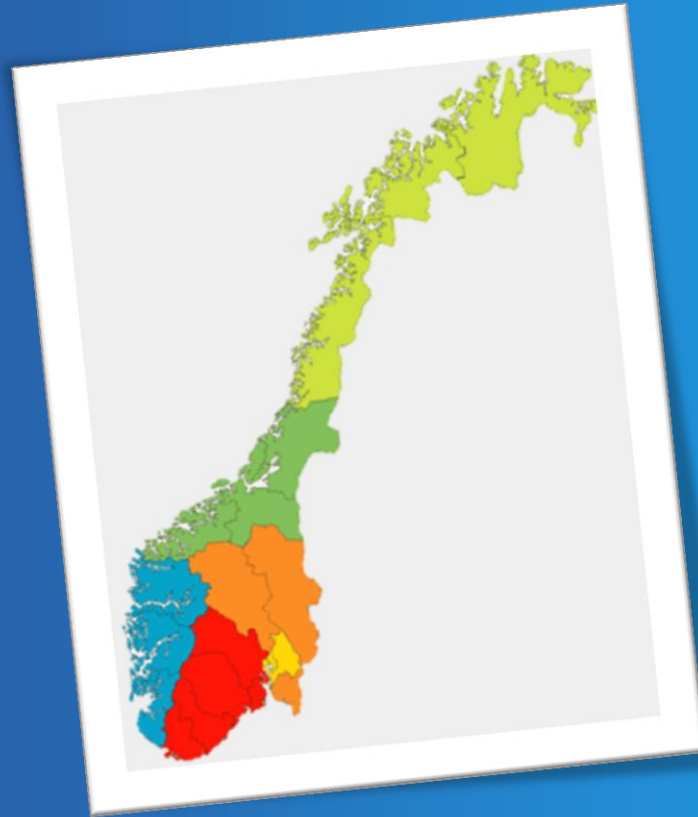
Home rollout

Business rollout

Wholesale rollout

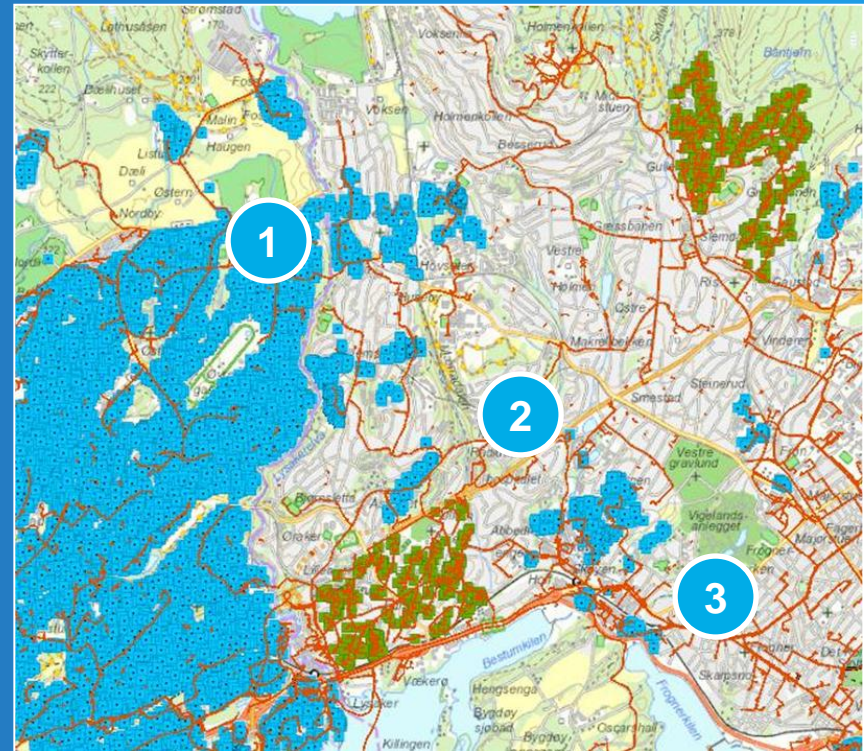
Delivery

Fault-handling



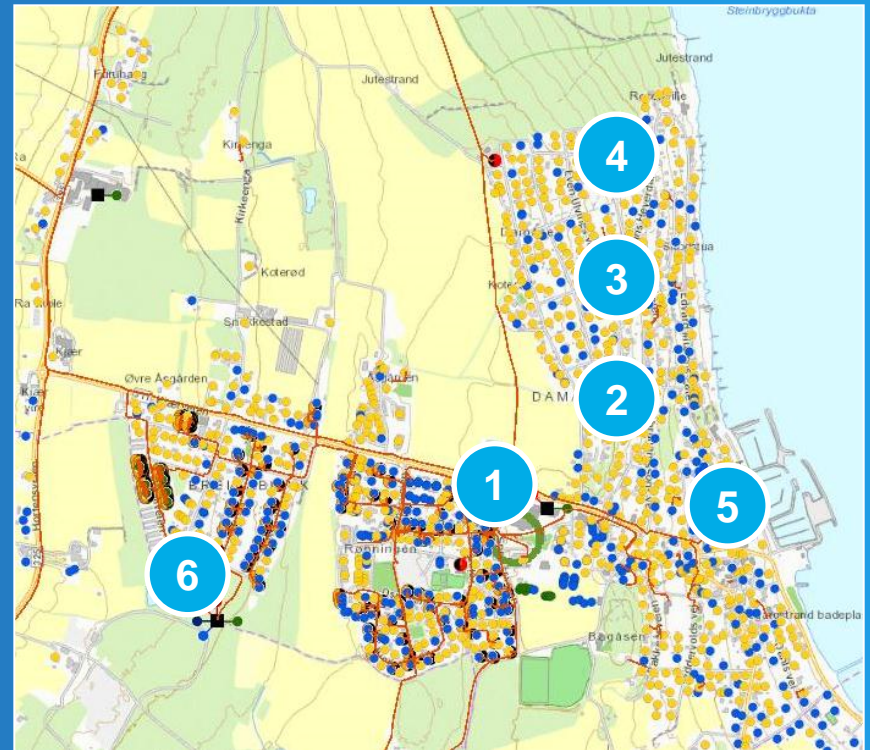
Leverage multiple technologies in the biggest cities to increase speed and grow subscribers

- 1 Defend cable connections by upgrading speeds
- 2 Deploy FTTH in areas currently served by low-speed DSL
- 3 Attack main competitors using existing infrastructure



Leverage multiple technologies in small towns, to bring high-speed broadband to entirely new areas

- 1 Existing Telenor infrastructure
- 2 Establish new fibre nodes
- 3 Offer FTTH to adjacent households
- 4 Offer FTTC to neighbouring households
- 5 Serve business market and improve mobile position
- 6 Upsell and densify FTTH



Working together with municipalities to bring high-speed broadband to remote parts of Norway

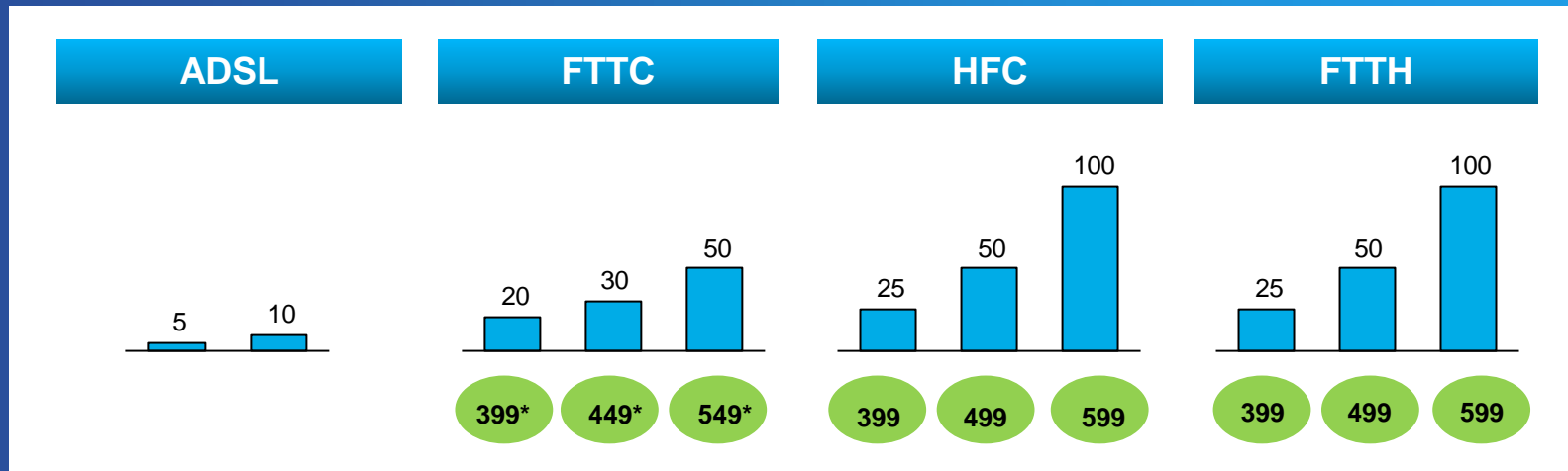


Vibeke Stjern
Mayor, Åfjord Municipality

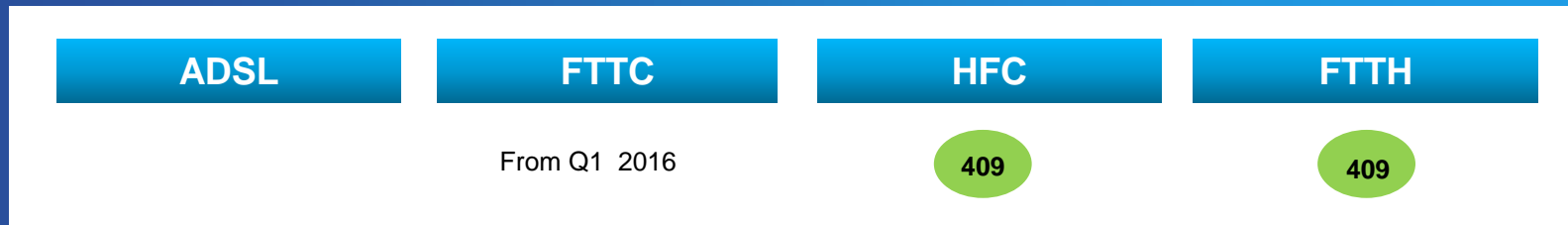


Aligning service offering across technologies

Broadband: Downstream speed (mbps) and price per month (NOK)



TV: Basic packages, price per month (NOK)

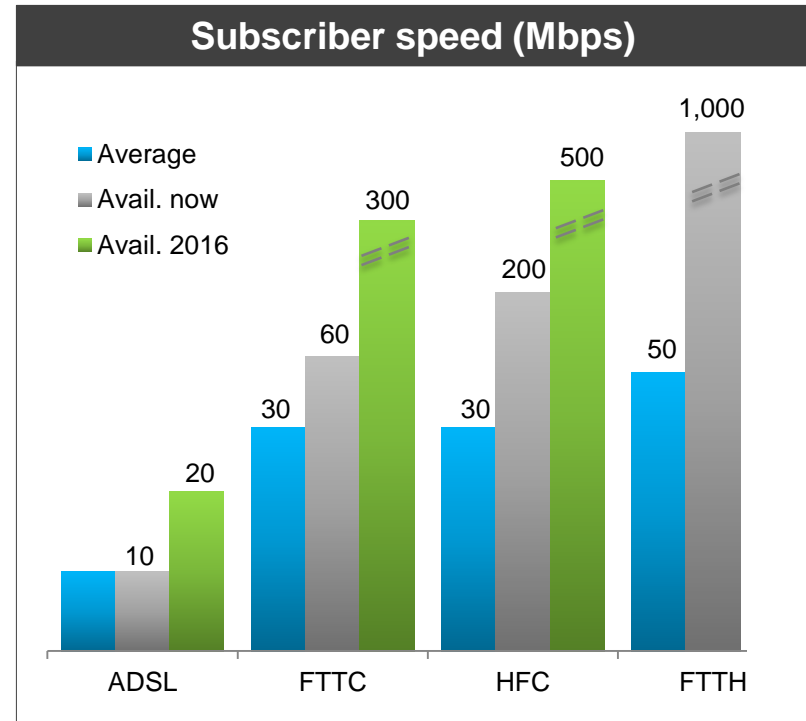
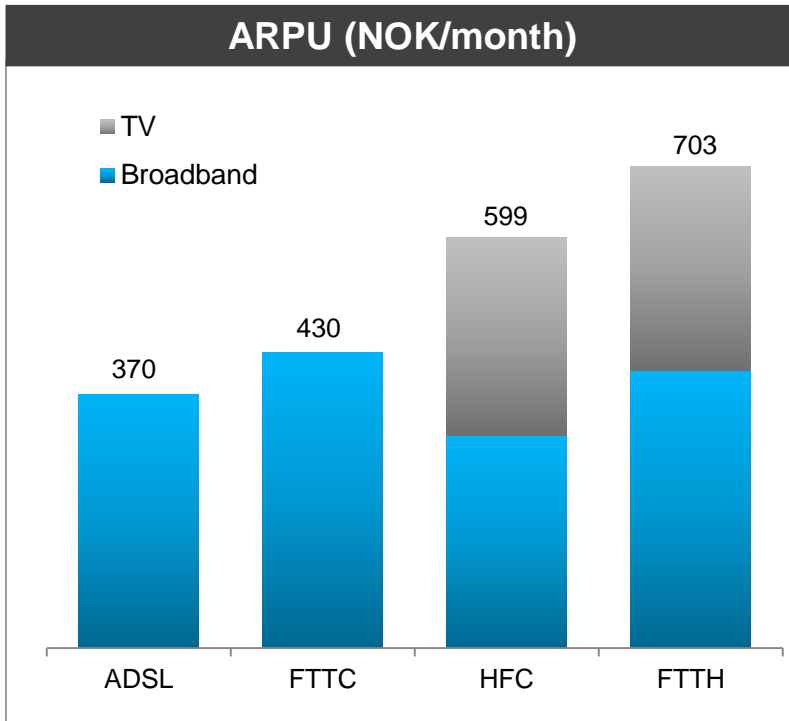


Upselling content through the T-We platform

- **Enable entertainment**
 - Music, On demand film, SVOD, archive, start / stop etc as an additional feature
 - Available at NOK 79 per month, included in Broadband 50 and Broadband 100
- **Adding features**
 - Security
 - Storage
- **Create efficiency**
 - Home office solutions
 - E-health



Providing higher-speed connections is key to grow ARPU and subscriber numbers



Currently not prioritising convergent offerings

- Bundling of fixed and mobile services currently a discounting game
- Limited demand for convergent offerings
 - Individual vs household consumption
 - 4 of 10 employees have their mobile consumption partly or fully paid by the employer
- Content already broadly and seamlessly available across devices
- Bundling of fixed and mobile attractive only if customers become willing to pay for convergent services



Our strategy to strengthen market leader position

Grow subscribers on existing infrastructure

Cluster-driven rollout, leveraging multiple technologies

Increase ARPU on existing customers





Q&A

