

Finland's Path to Becoming Number 1 in 5G

Markus Mettälä

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Content

1. Mobile broadband in Finland today
2. 5G Momentum ecosystem



Mobile broadband in Finland today

- Three nationwide teleoperators
- More frequencies for mobile broadband than anywhere in Europe relative to population
- New spectrum more quickly in use than in other European countries
- Unlimited data, inexpensive prices, good coverage



Telia



700 MHz

450 MHz

800 MHz

900 MHz

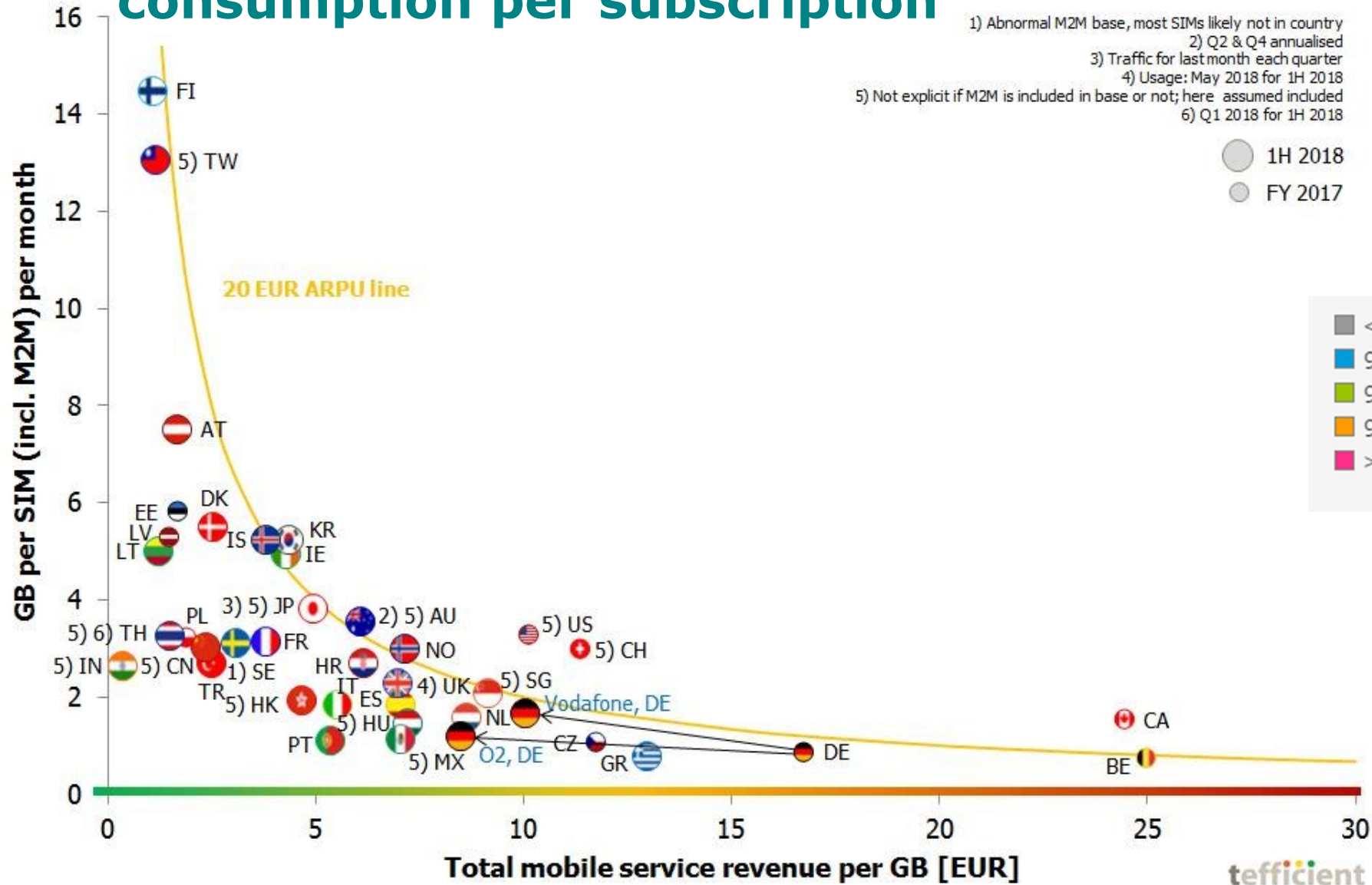
1800 MHz

2,6 GHz

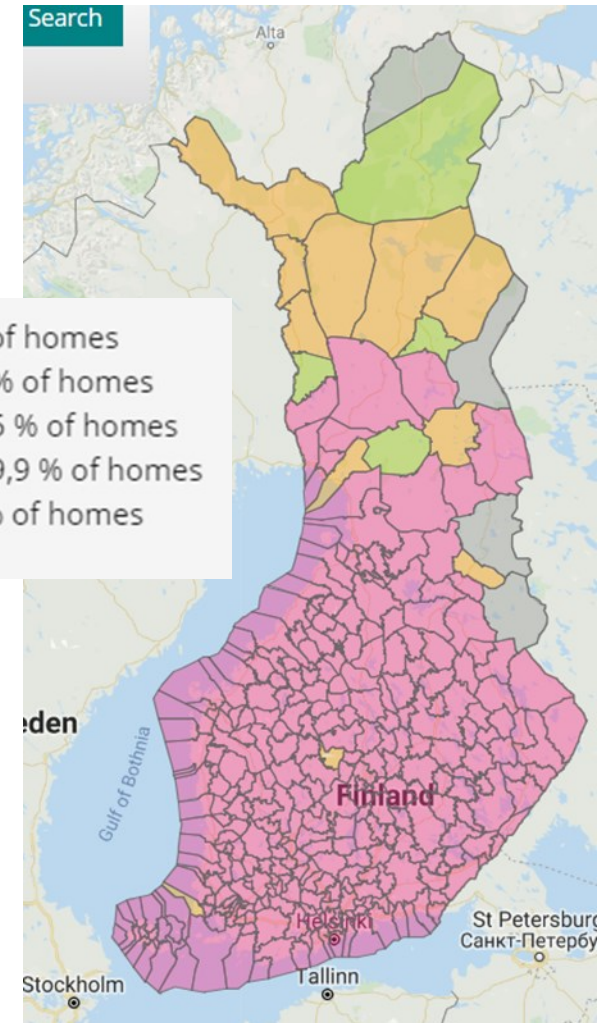
3,5 GHz

26 GHz
(y 2020)

Finns are #1 in the world in mobile data consumption per subscription



4G covers
99% of homes



5G Momentum

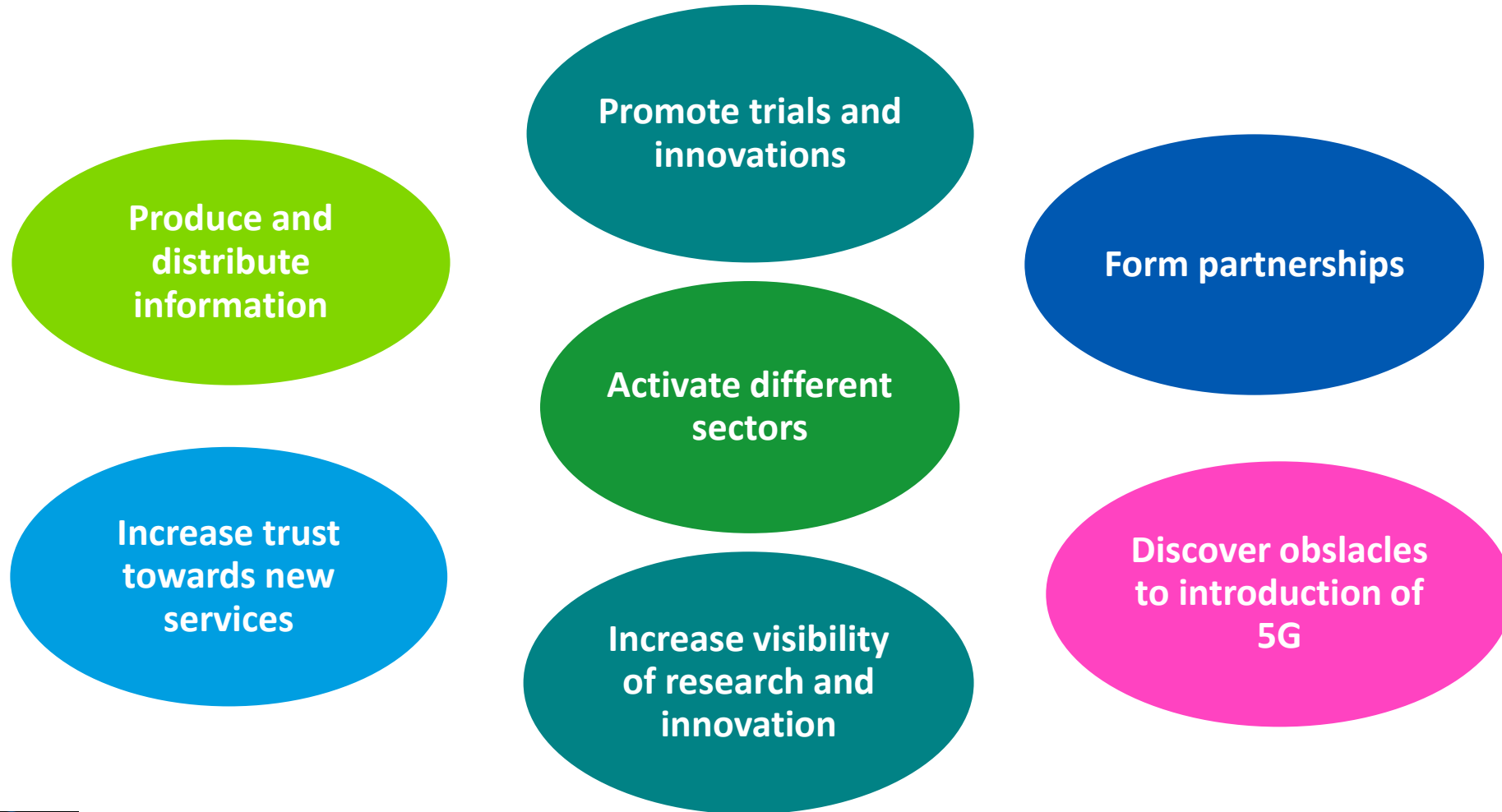
- Is an ecosystem coordinated by Traficom.
- Promotes new services and innovations using 5G trials to make Finland #1 in 5G
- Brings together the needs and ideas of different actors and encourages cooperation
- Develops Finnish digital society and makes Finnish 5G-knowledge more visible



5G Momentum key motivators

- Benefits of 5G are largely in the verticals
 - Identify potential 5G use cases in different sectors and do trials to test them in practice
 - What are the requirements different use cases pose on 5G networks
 - Requirements for coverage, QoS, reliability etc.
- What type of 5G networks are needed and how and by who are they constructed and operated
- By trialing we can gain more knowledge and insights which can be used for developing right and enabling environment for digital future

5G Momentum ecosystem helps Finland becoming #1 in 5G



Sector specific challenges

- Drones: How to enable large scale use
 - Promote the use of 4G/5G for connectivity
 - Demonstrate UTM (U-Space Traffic Management) system
 - Weather forecasts for drones
- Intelligent Transport Systems and logistics
 - How will 5G be used in the transport sector
 - Service scenarios
 - Who builds 5G for roads and how?
- Smart cities
 - What is the role of the city in 5G?
 - How would neutral host model operate?
 - Business models



Sector specific challenges

- Maritime: smart sea routes and automation
 - Benefits of 5G & smart fairways and services
 - Maritime 5G connectivity, satellite vs. terrestrial
 - New innovative ways to build terrestrial coverage
- Local needs for industry and harbors
 - How to build tailored 5G networks for local needs?
 - Operating models of local networks
 - Reliability for automation
- Agriculture and forestry & health and wellbeing
 - What are the benefits of 5G
 - Required features and coverage
 - Wide area & local 5G networks



Close co-operation with other ecosystems

- [5G Test Network Finland](#) (research & trials)
- [5G Finland](#) (operator driven ecosystem)
- [Traffic Lab](#) (lead by Traficom)
- [One Sea](#) (autonomous maritime)
- [Arctic Drone Labs](#)
- [Research Alliance for Autonomous Systems](#)
- Business Finland (funding)
- etc...



Thank you !

<https://www.traficom.fi/en/communications/communications-networks/5g-momentum-giant-leap-forward-finlands-path-becoming-5g>

Markus.mettala@traficom.fi

@MarkusMettala

www.traficom.fi

@TraficomFinland

