

# MOBILE ROLLOUT

KTH

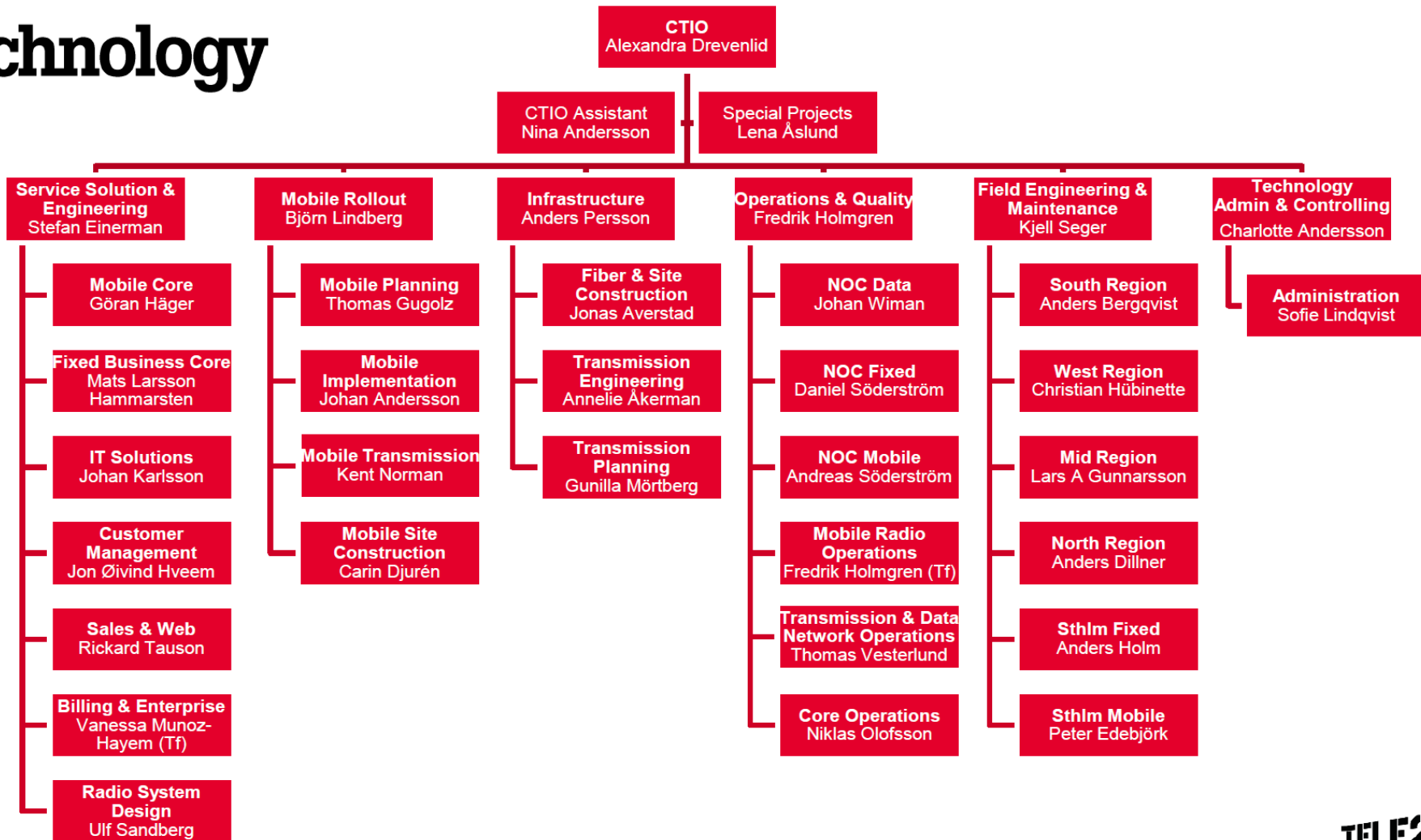
Björn Lindberg

TELE2

# Agenda

- 9.00-10:00 Mobile Rollout
  - General limitations for an operator
  - Site planning
- 10:00-10:10 NOC
- 10:10-10:30 Site Visit
  - Site equipment

# Technology



# Tele2 network status 2014

## — 2G

- Swapp from Motorola->Huawei done Q1 2013.
- MOCN with Telenor Q2 2013

## — 3G

- All sites now on IP trm.
- 150 new sites have been put onair this year.
- A large number of network quality/capacity parameters have been tested in the labb and after that been implemented in the network.

## — 4G

- ----- 4G sites is onair and all of them have LTE900 and ----- of them LTE2600.
- LTE800 have been rolled out on ----- sites during the year.
- LTE1800 to support Iphone5 is rolled out in Stockholm, Göteborg and Malmö, and other hotspots.
- Major LTE rollout is ongoing from 70-90% Area Coverage in sweden.

# Frequencies

MHz	Bandwidth			3	T2 Frequencies
	T2	TN	TS		
800	<b>10</b>	*	10	10	FDD5 811-816/852-857 MHz FDD6 816-821/857-862 MHz
900	<b>20</b>	*	10	5	935-950/890-905 MHz Swefour 930-935/885-890 MHz
1800	<b>35</b>	*	35	-	1745-1780/1840-1875 MHz
2100 (FDD)	<b>20</b>	20	*	20	1905-1910 MHz (TDD) 1959,9-1979,7/2149,9-2169,7 MHz
2600	<b>40</b>	*	20	10	2500-2520/2620-2640 MHz 2550-2570/2670-2690 MHz

\*Joint venture with Tele2 (SUNABand N4M)

# Tele2's mobile network in Sweden

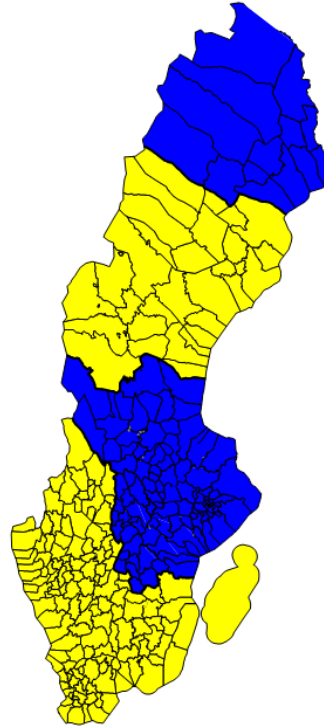
## Tele2/Telenor Net4Mobility

900 MHz (GSM)  
1800 MHz (GSM)

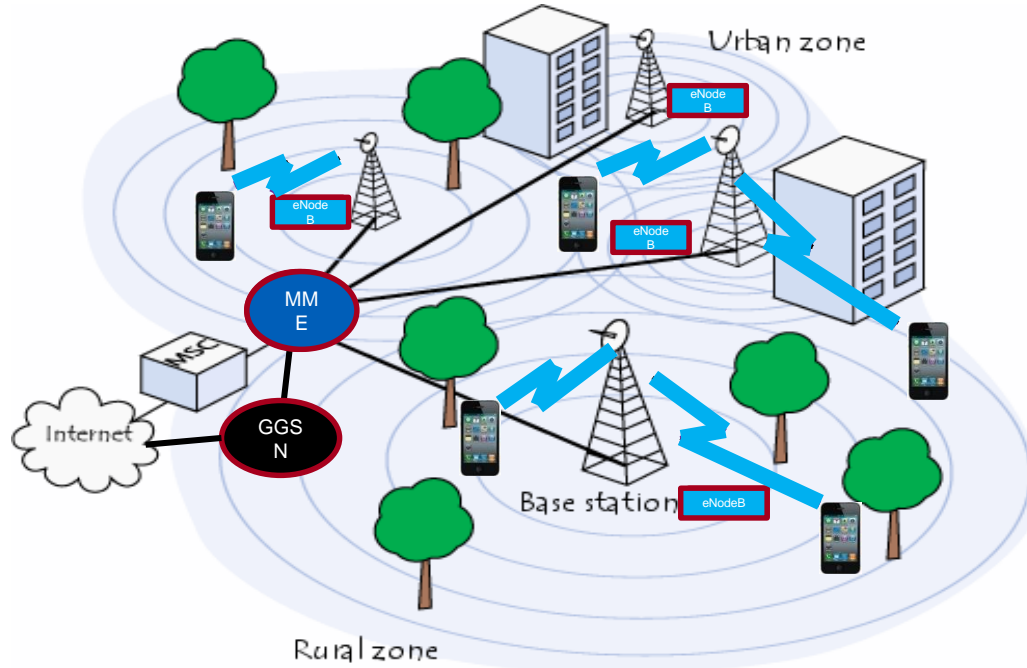
800 MHz (LTE)  
900 MHz (LTE)  
1800 MHz (LTE)  
2600 MHz (LTE)

## Tele2/TeliaSonera Sunab

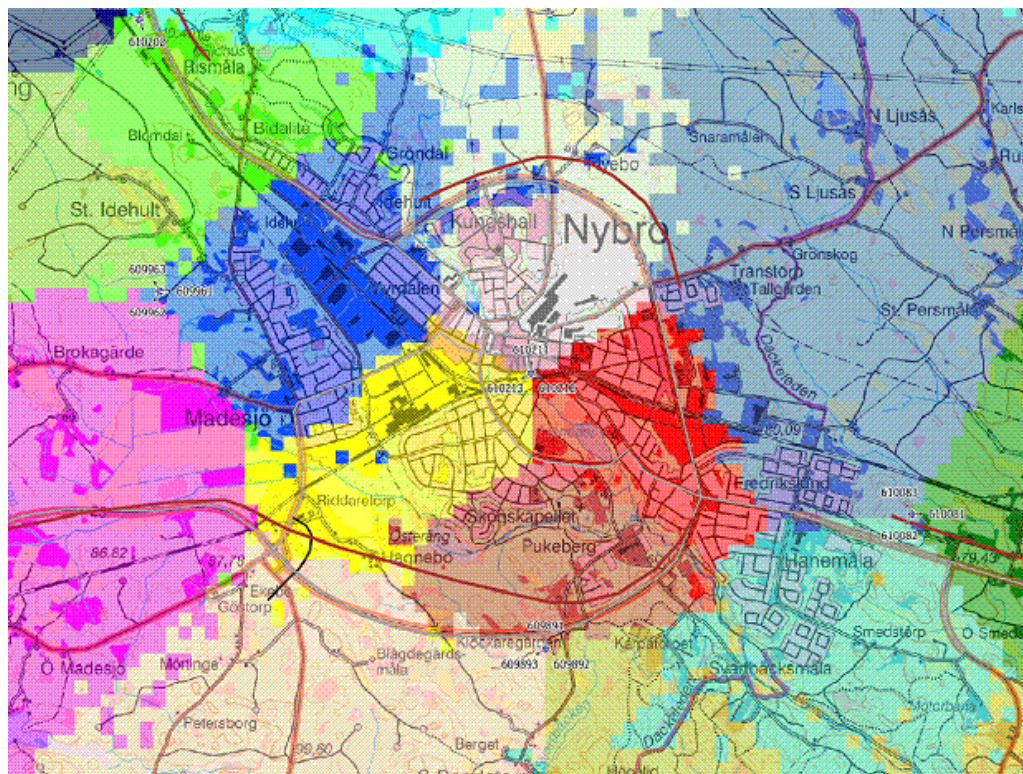
2100 MHz (UMTS)



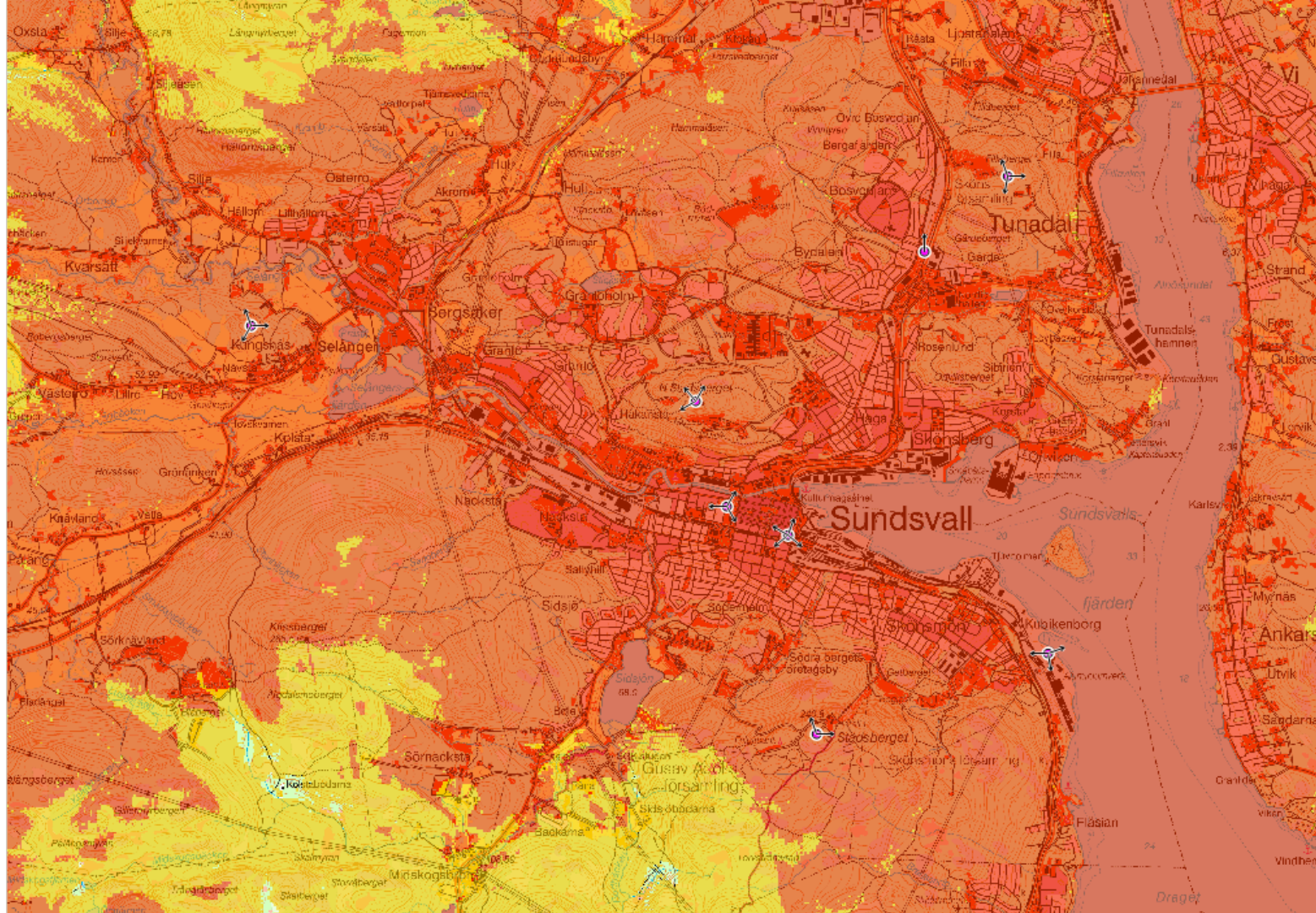
# 2G/3G/4G

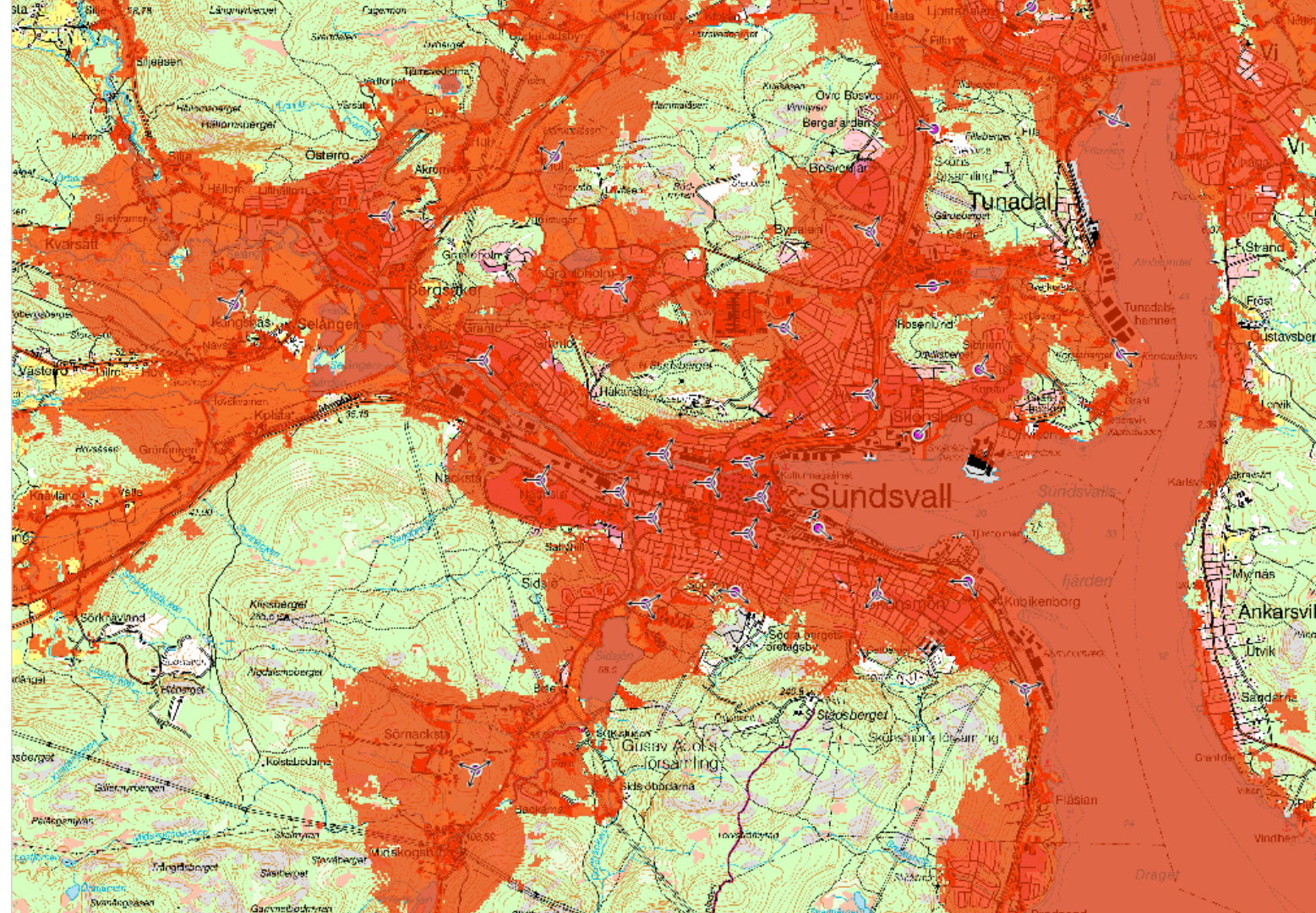


# Coverage Map









## Nämdö - stagad mast 54 m



# 3 sector mounted on the chimney



Transmission

# Stadshuset



# Preem Normälärstrand



# Stortorget

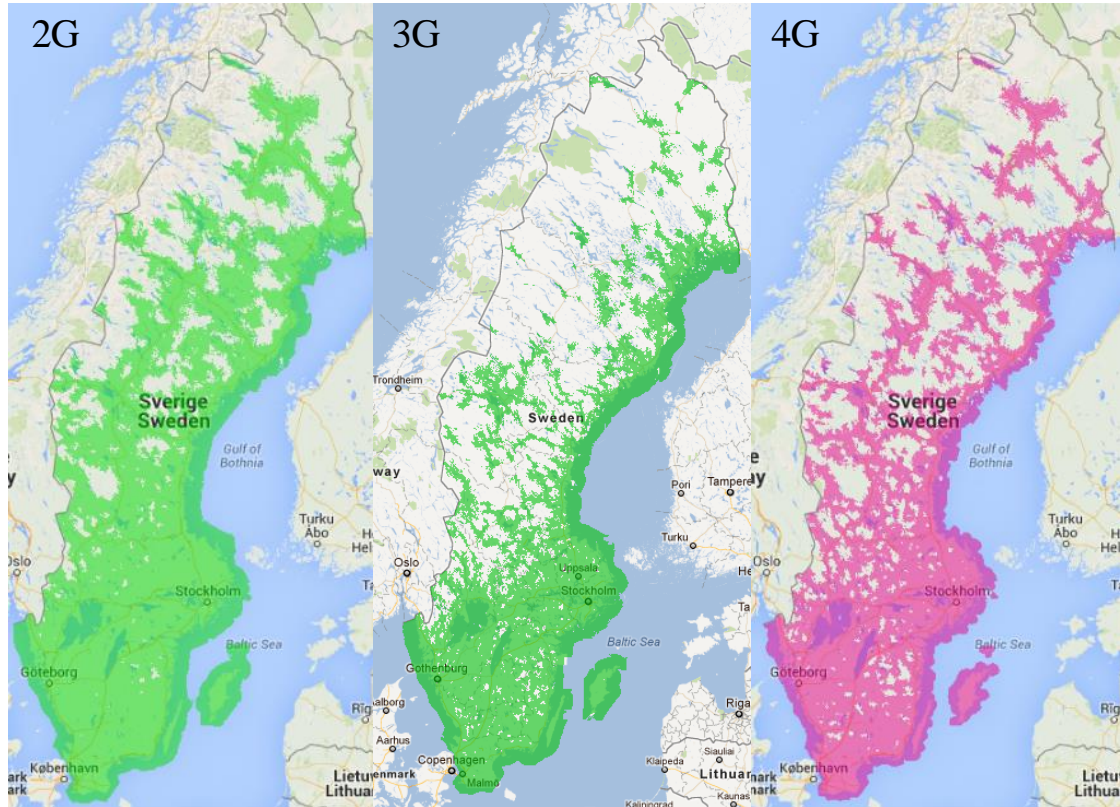


# Västerlånggatan

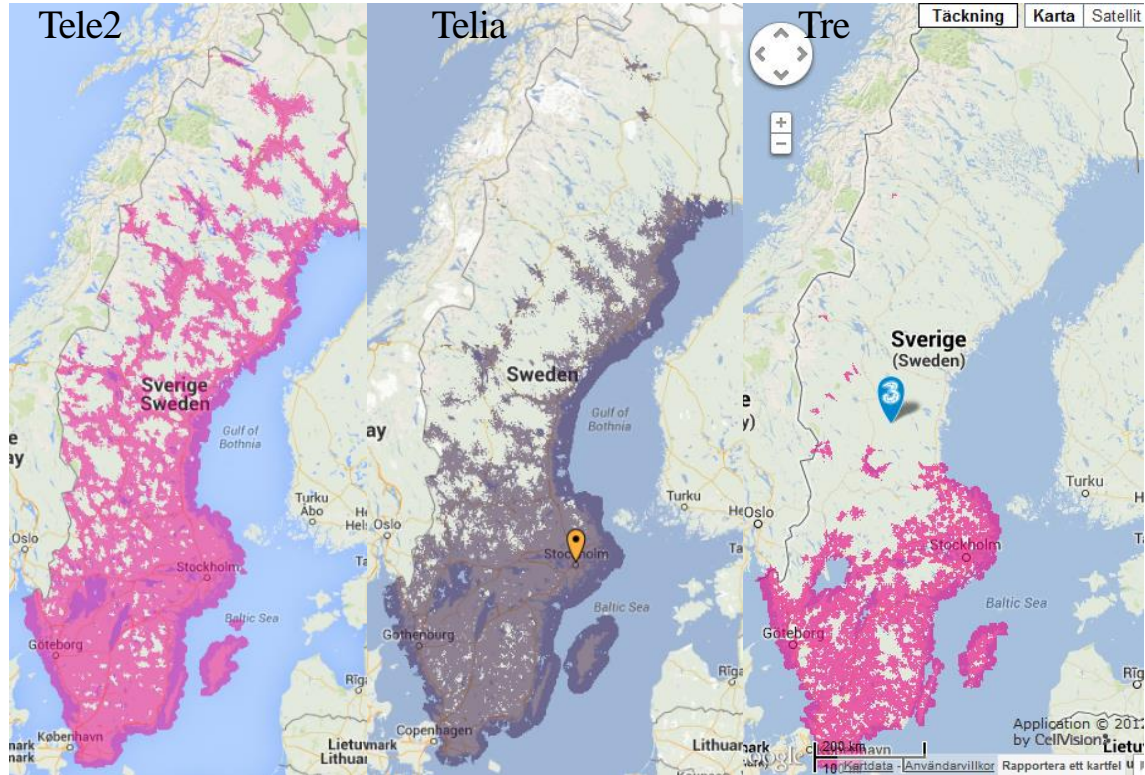




# Tele2 Sverige täckning



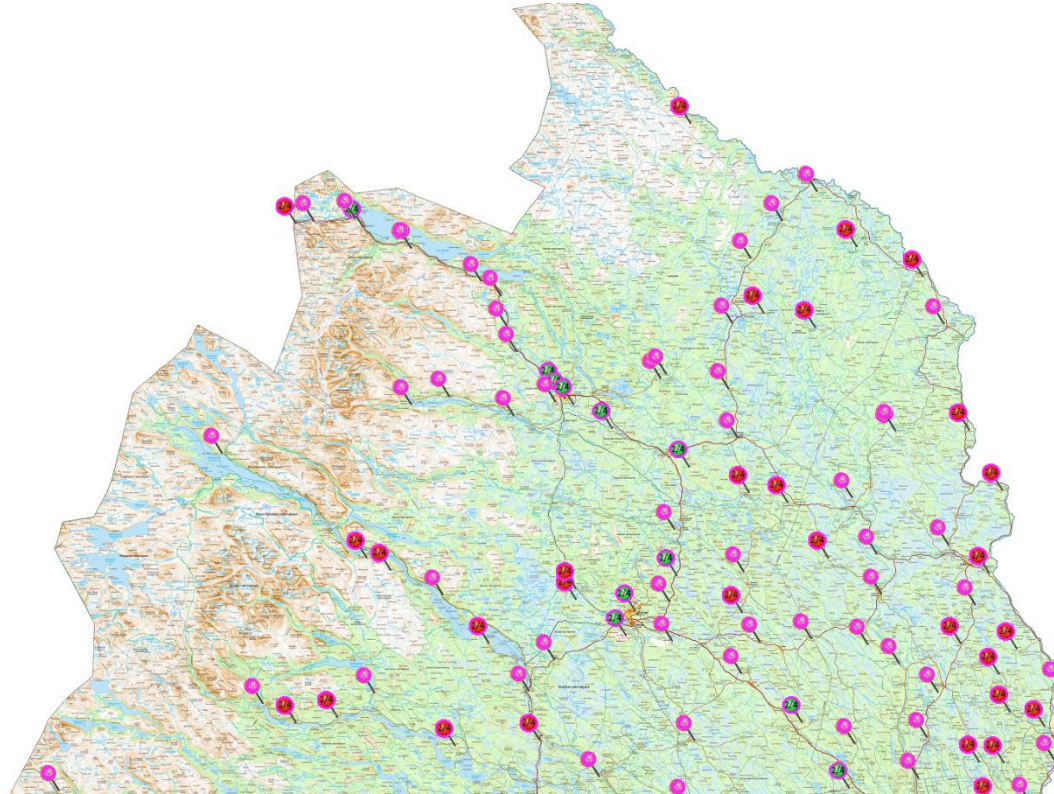
# 4G Täcknings jämförelse 2014



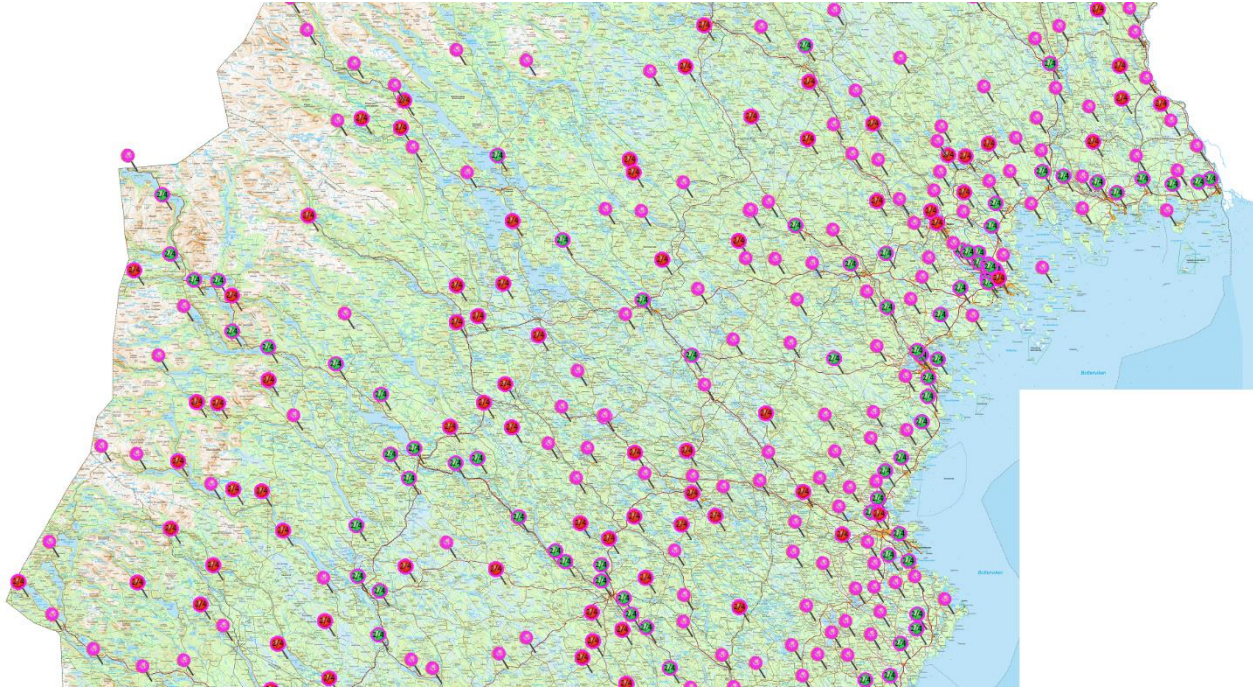
# Tele2 2G/4G Satsning

Län	% antal fler siter		
Blekinge	23%		
Dalarna	69%		
Gotland	24%		
Gävleborg	80%		
Halland	36%		
Jämtland	88%		
Jönköping	55%		
Kalmar	57%		
Kronoberg	22%		
Norrbottn	242%		
Skåne	23%		
Sthlm	21%		
Södermanland	57%		
Uppsala	61%		
Värmland	75%		
Västerbotten	143%		
Västernorrland	100%		
Västmanland	39%		
Västra Götaland	33%		
Örebro	56%		
Östergötland	36%		
<b>Totti</b>	<b>44%</b>		

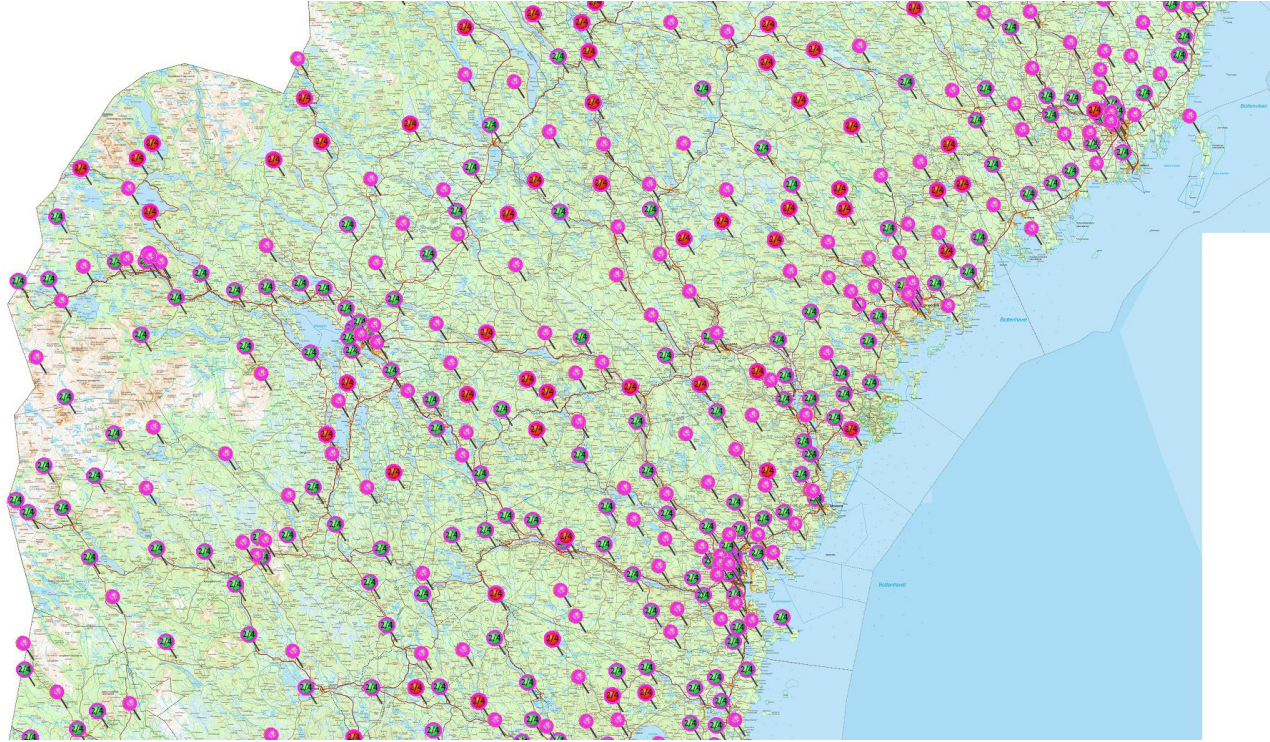
# Täckningsutbyggnad 2014-2016



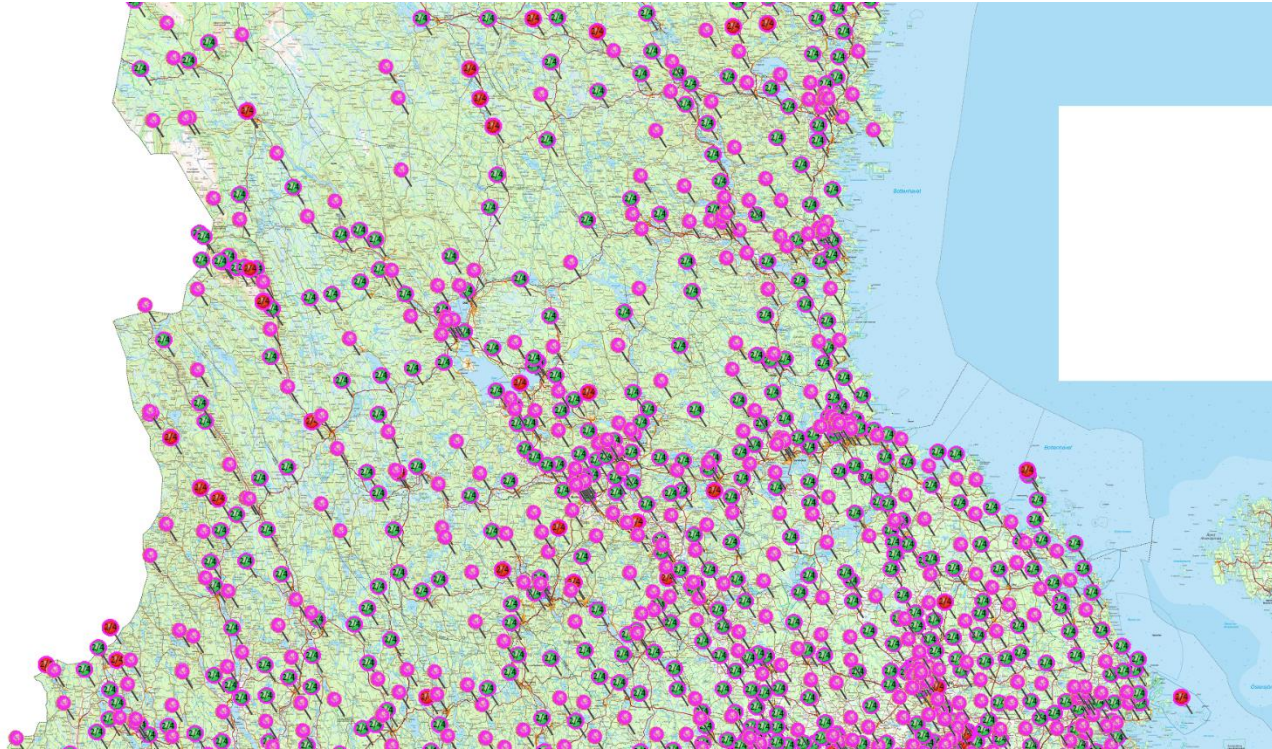
# Täckningsutbyggnad 2014-2016



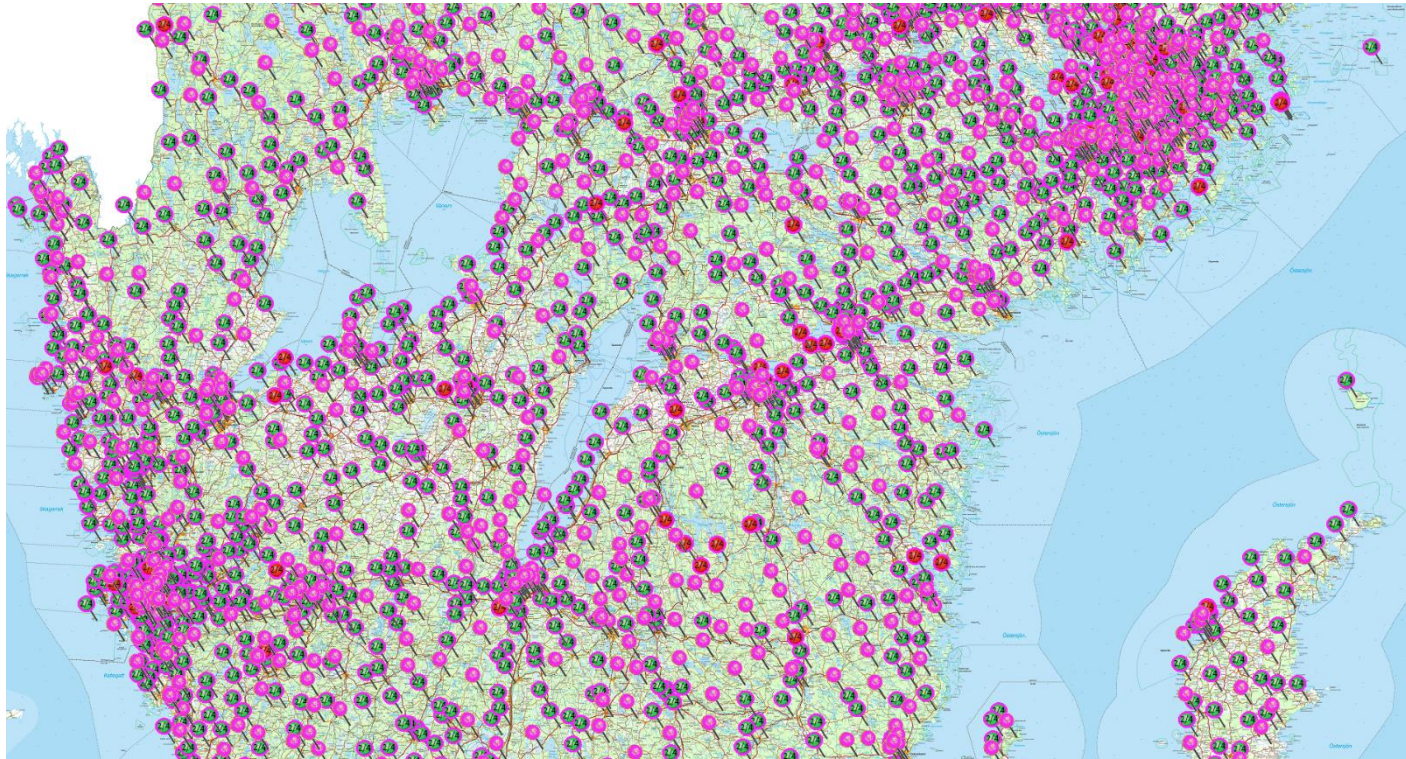
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# Täckningsutbyggnad 2014-2016

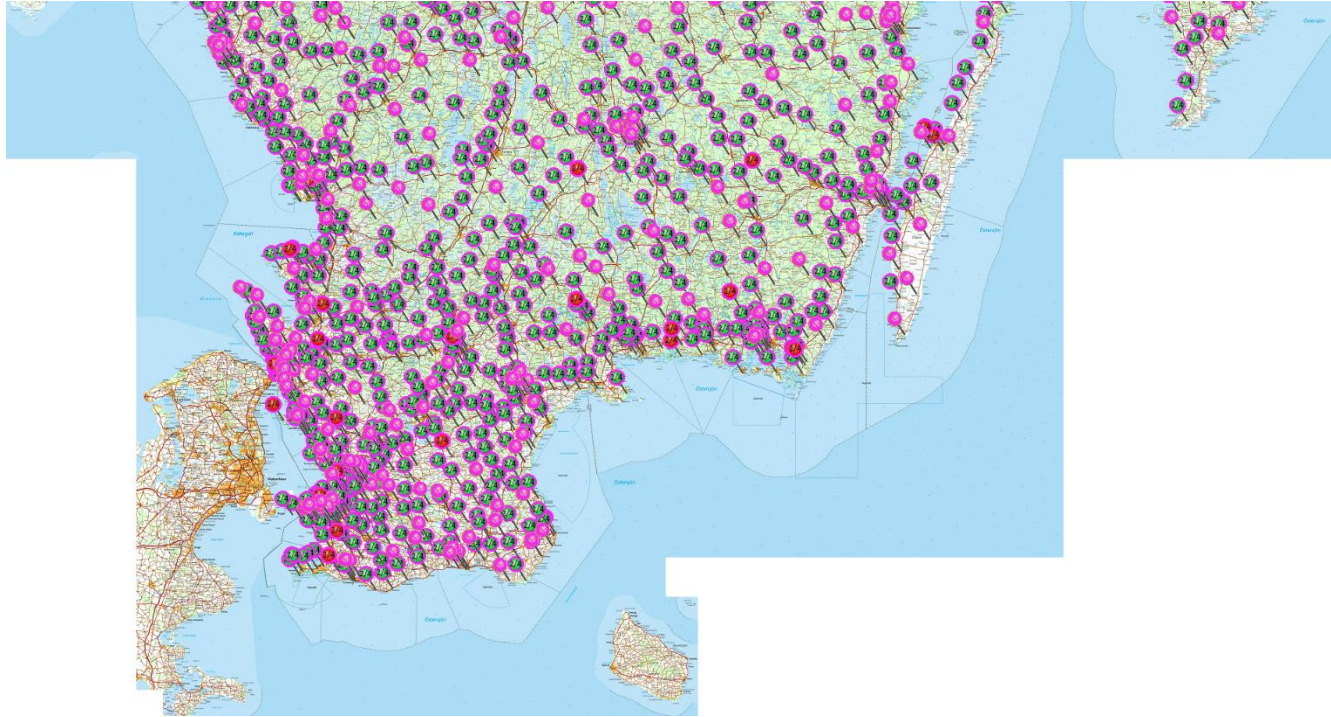


# Täckningsutbyggnad 2014-2016

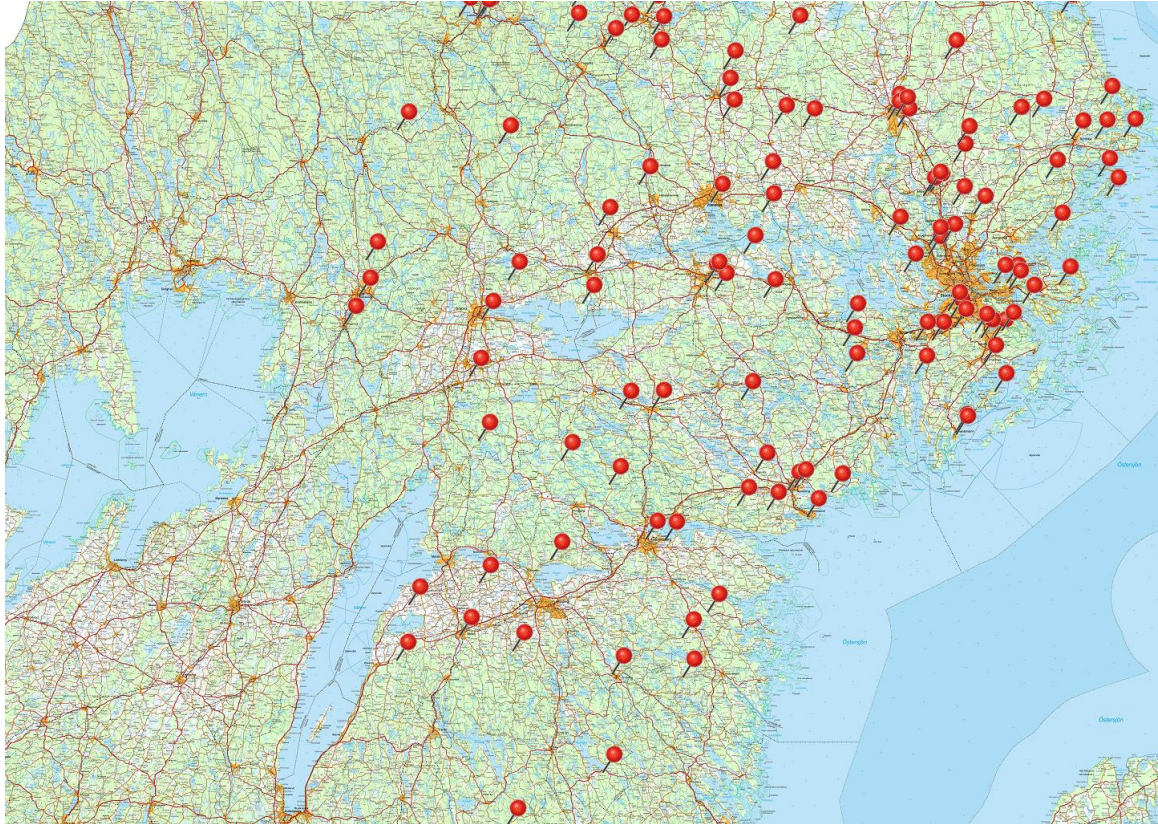




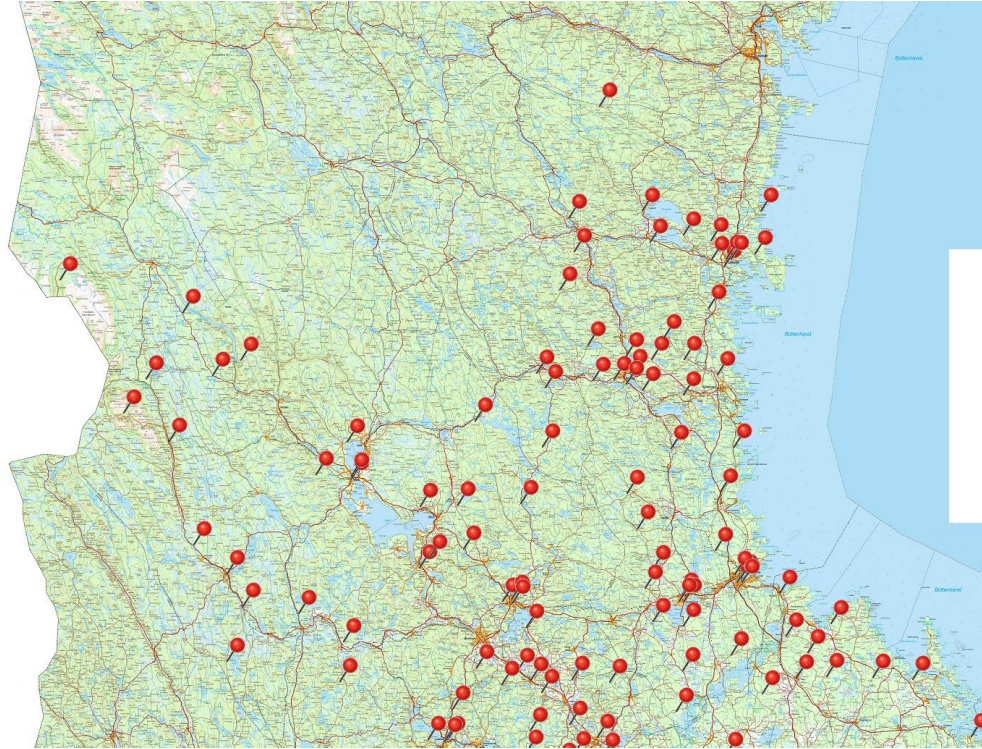
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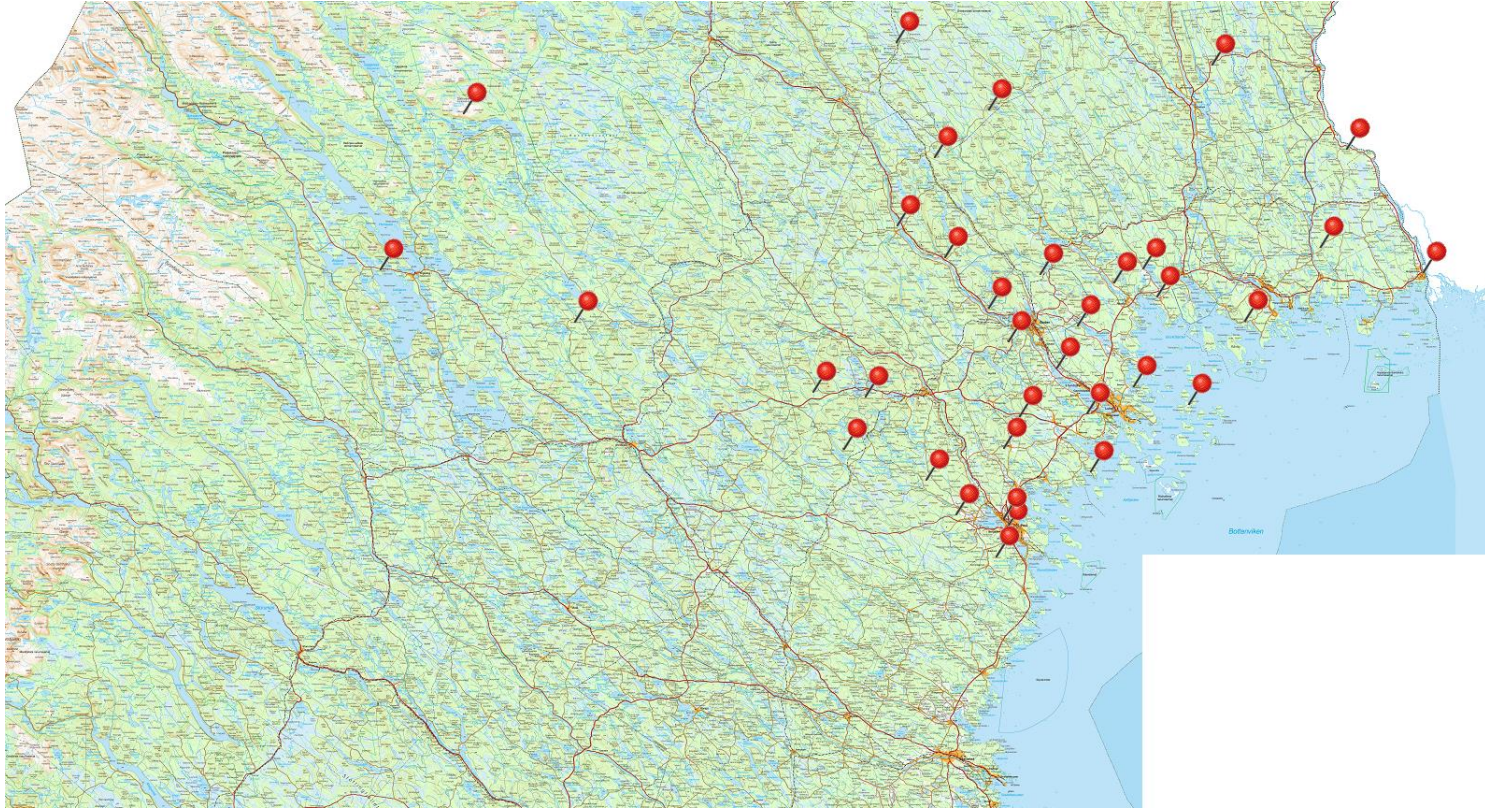
# Byggklara siter EC fram till nu...



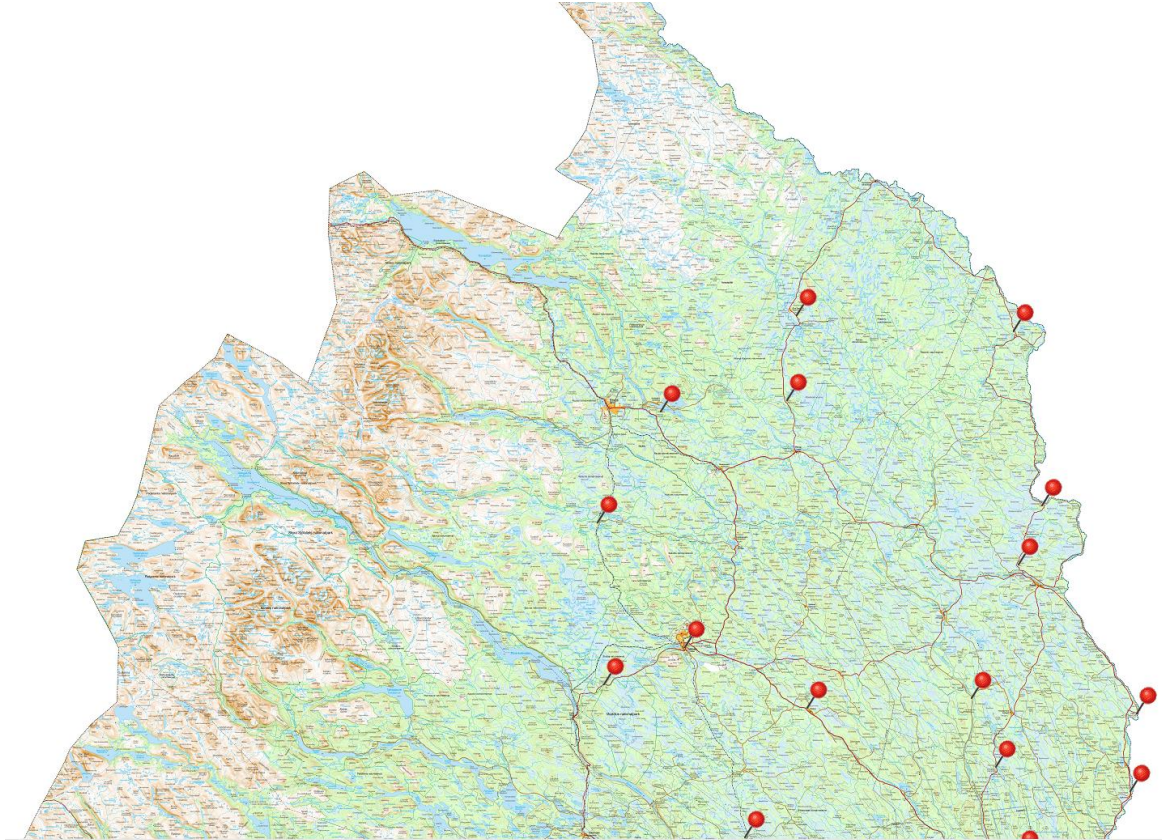
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# TECHINFO

- Volte..
- LTE Advance (Carrier Aggregation..)
- Voice over Wifi (WoWifi and more...)

**THE  
END**

**TELE2**