


The Mobile Broadband Explosion

A photograph of two women sitting outdoors, looking at a laptop. The woman on the right is pointing at the screen, which displays a green landscape. The background shows a city street with buildings and a canal. In the foreground, there are two tulips, one yellow and one orange.

Matts Sporre
LTE Russia & CIS Forum
26-27 May

Once upon a time...



Swedish police land-mobile-radio 1935

Before you can walk...

Development 1949 - 1955

Commercial life 1956 – 1969

Fully automatic system.

4 channels in 160 MHz band

Coverage - 30 km around Stockholm
and Gothenburg

Phone equipment weight: 40kg

Maximum customer base:
- 150 (1962)



MTA – Mobile Telephony system A

Before you can walk...

Development 1955 - 1965

Commercial life 1965 – 1983

Fully automatic system

76-77.5 & 81-82.5 MHz bands

Coverage:

- Stockholm, Gothenburg, Malmö

Equipment weight: 10 kg

Max customer base

- 660 (1978)



MTB – Mobile Telephony system B



Before you can walk...

Development 1970 - 1971

Commercial life 1971 - 1987

A manual system

Coverage: Sweden,
Norway and Denmark

Equipment weight - 4 kg

Maximum customer base:
- 19 700 (1980)



MTD – Mobile Telephony system D



Before you can walk...

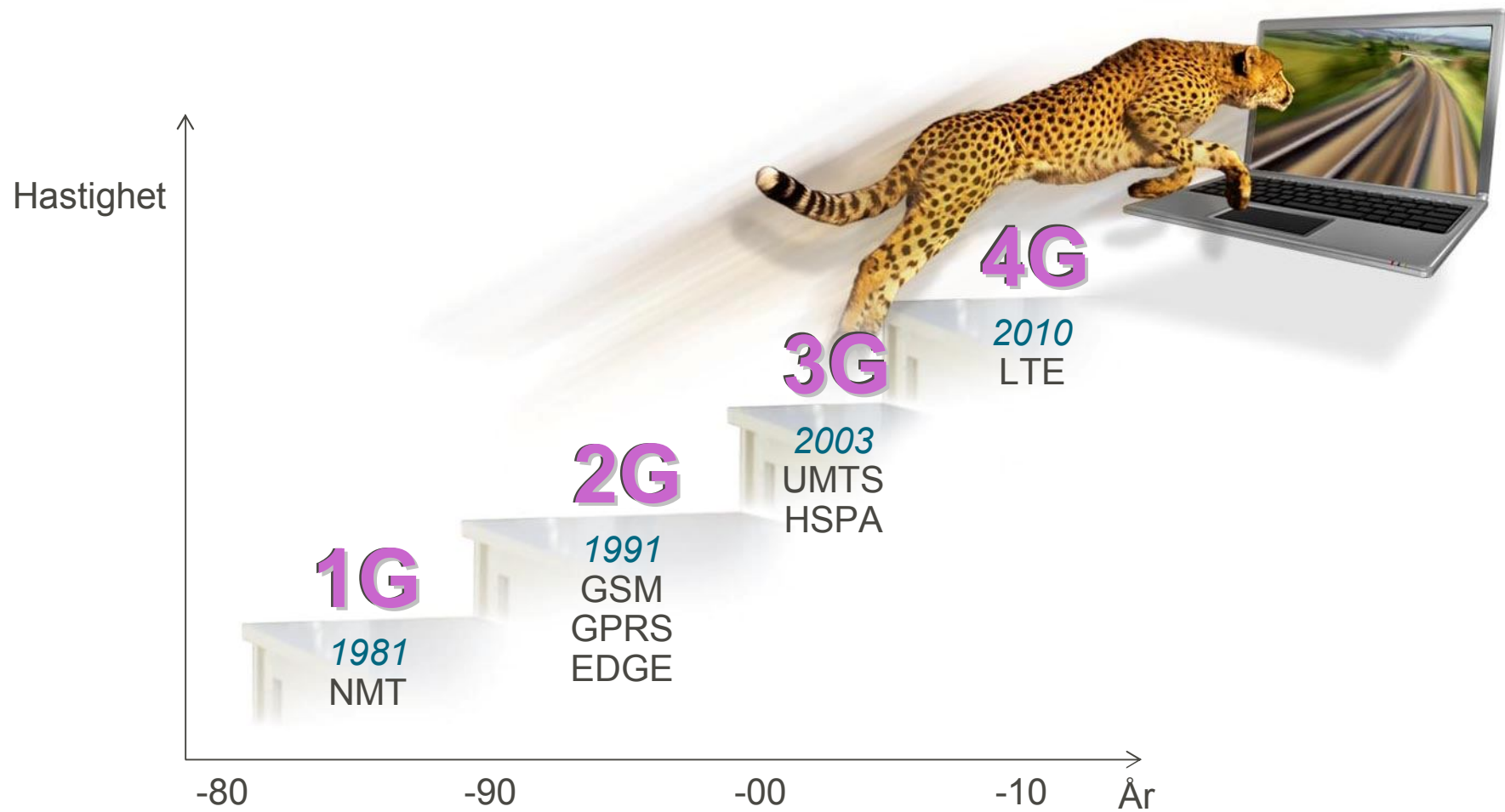
MTC = NMT = 1G



C



From 1G to 4G

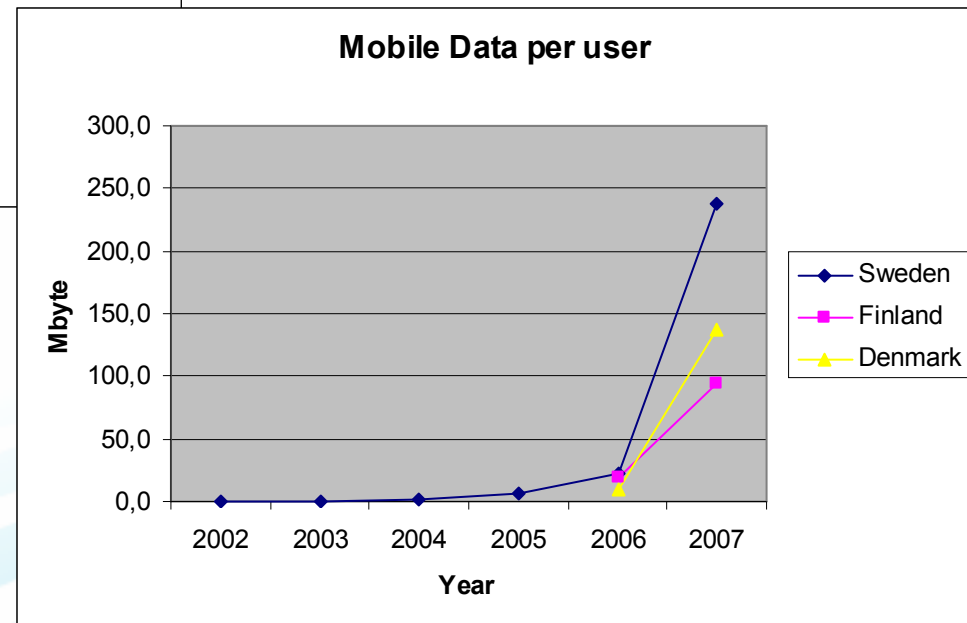
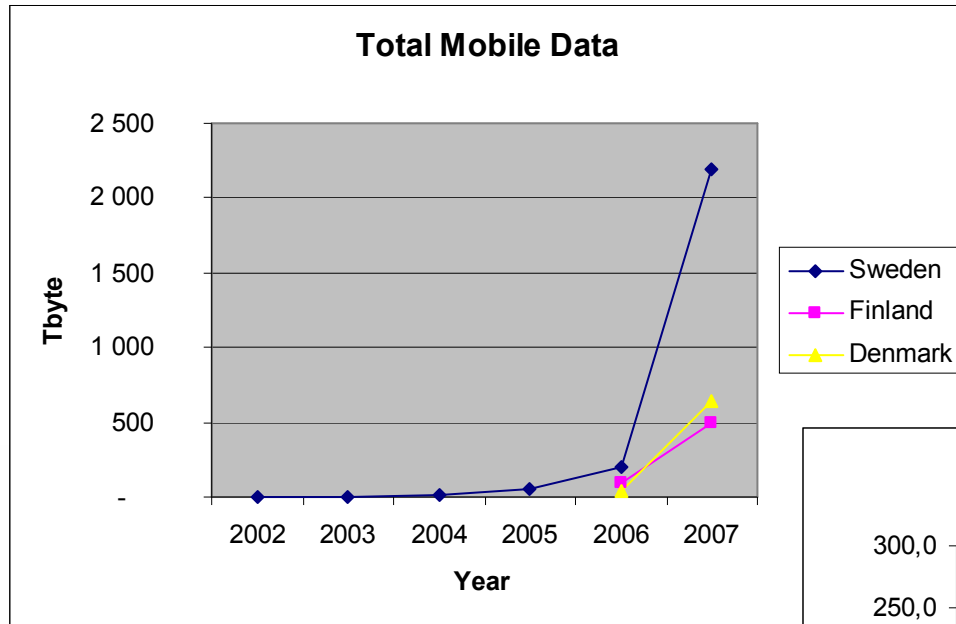


Mobile Data Development

Nordic Region

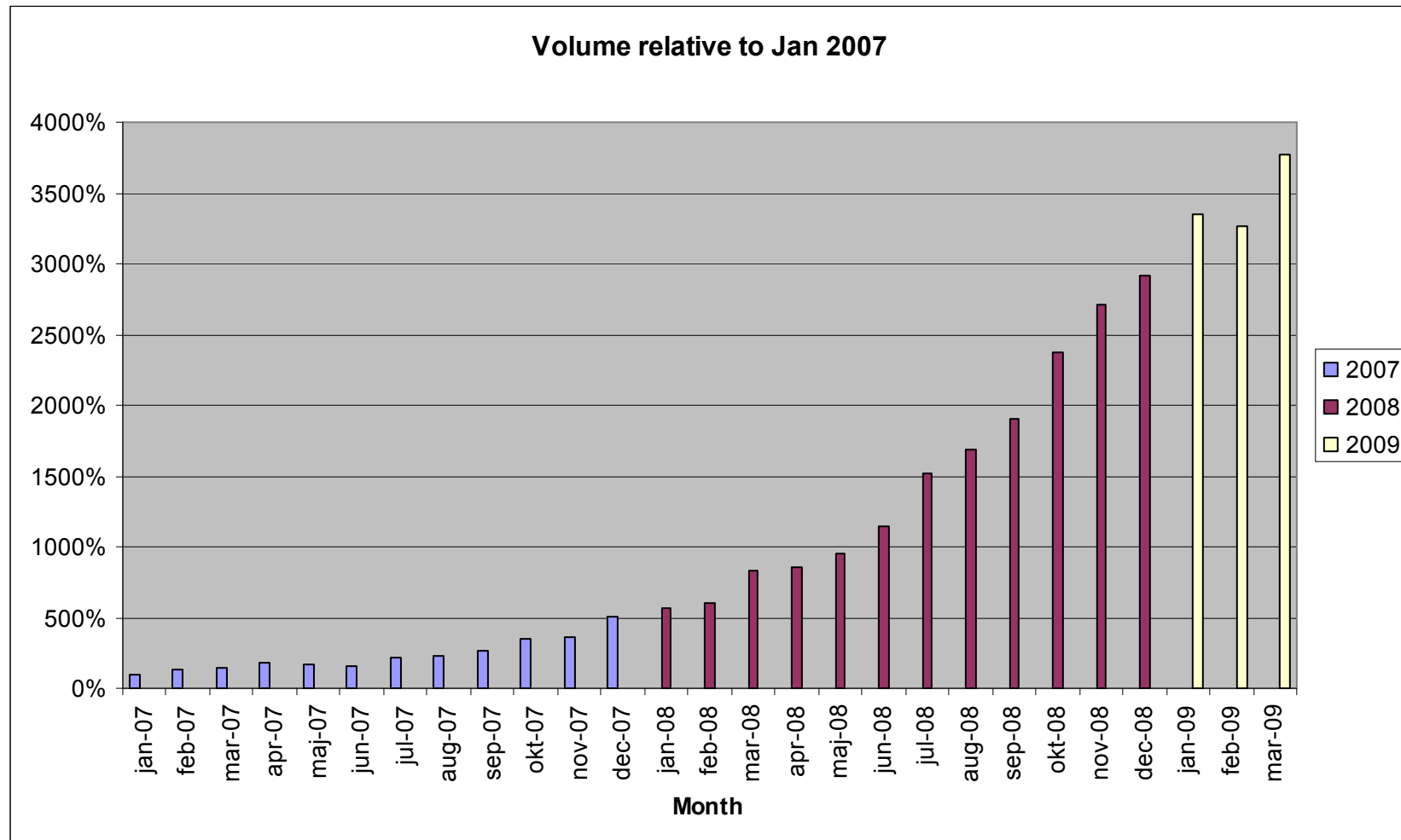


Total traffic per country (all operators)

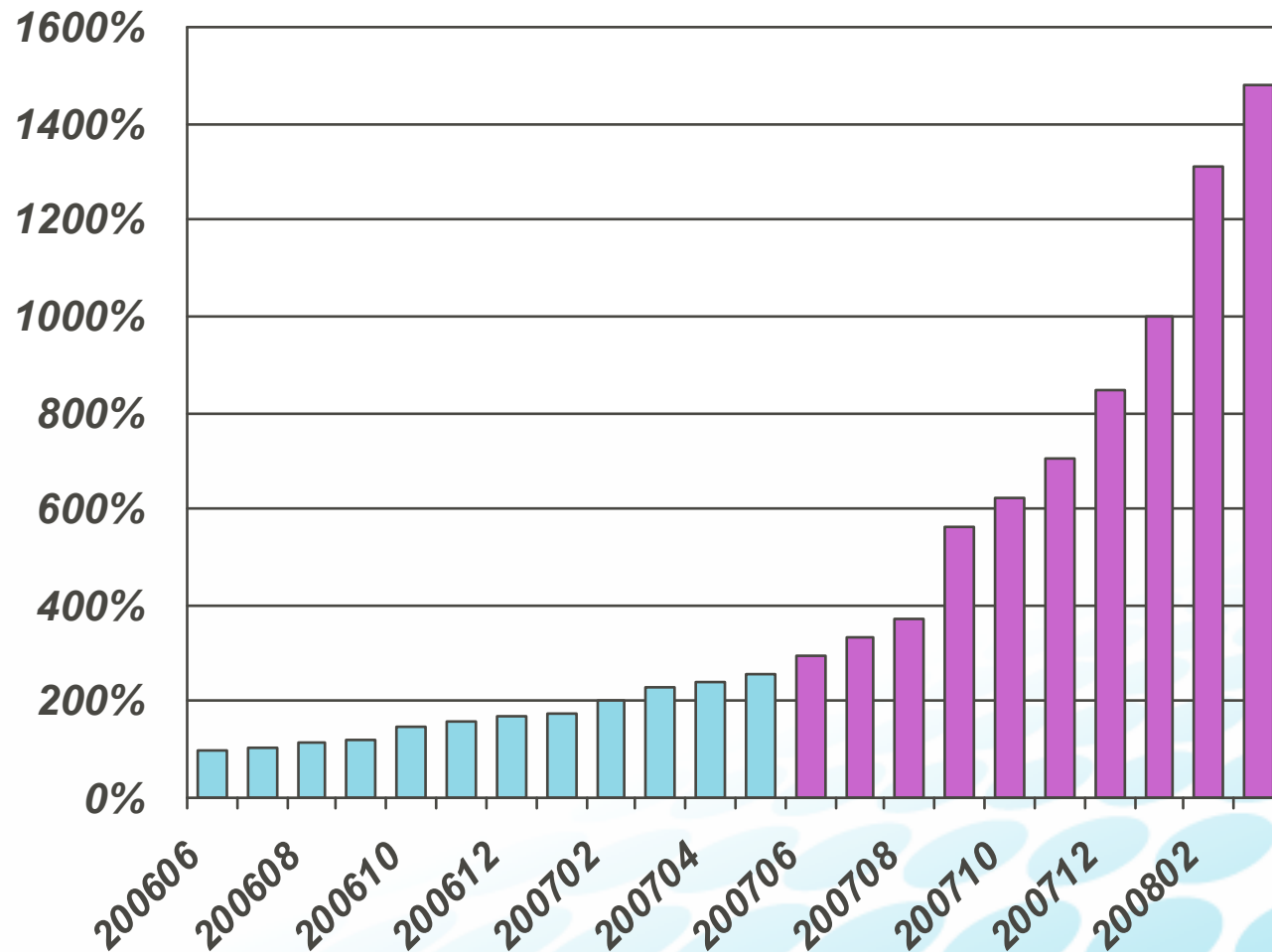


Source: Swedish, Finnish and Danish regulators

Traffic in the TeliaSonera Nordic Networks



Relative number of PC modules in Telia's network



A photograph of a man and a woman walking on a train platform. They are both wearing winter coats and carrying luggage. The woman is pointing towards the sky, and the man is looking in the same direction. In the background, a train is visible, and another person is walking away. The scene is brightly lit, suggesting a sunny day.

Main drivers

What makes subscribers need mobile broadband?

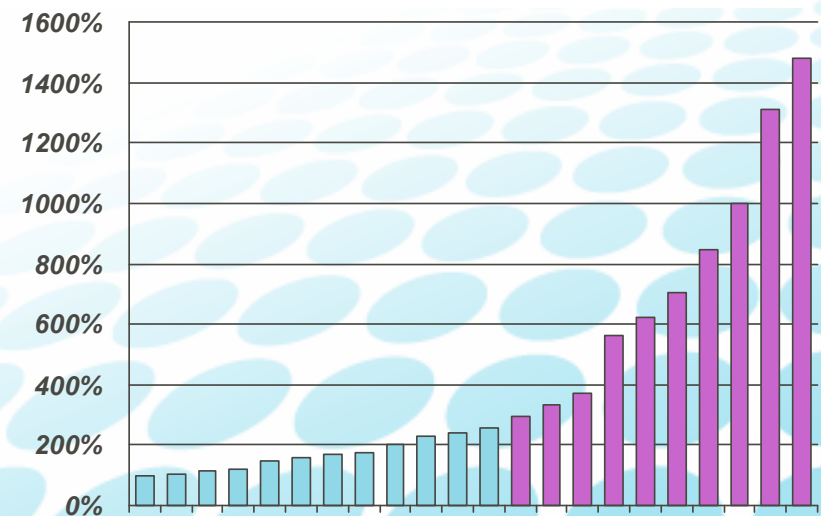
Flat rate business model



- Top 10 devices in TeliaSonera Sweden stores

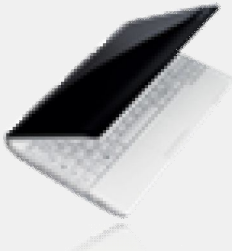
March 2007	May 2007
1 Sony Ericsson W880i	1 Nokia 1110i
2 Nokia 1110i	2 Nokia N95
3 Nokia 5140i	3 Sony Ericsson K810i
4 Sony Ericsson K800i	4 Sony Ericsson W880i
5 Sony Ericsson W300i	5 Nokia 5140i
6 Sony Ericsson K750i	6 Nokia 6085
7 Nokia N73	7 Sony Ericsson K750i
8 Sony Ericsson Z710	8 Sony Ericsson Z710i
9 Sony Ericsson W810i	9 Sony Ericsson K610i
10 Nokia 6131	10 Nokia 6300

- Increase of # PC modules



Post flat rate subscription examples

- Bundling and price plans



Windows XP Home
Intel® Atom™ Processor N270 1,6Ghz
1 GB internminne
160 GB hard drive
10.2" inch screen
WLAN 802.11/b/g
Built in 3G
Weight 1.19 kg

One time fee 28€

Monthly fee (9+23)€

3yr subscription period

- 5Gb/month for 25€/month (20€ if you also have fixed broadband)
 - Up to 7,2 Mbps in (almost) the whole network
 - Up to 14,4Mbps (covers ca half of Swedens population)
 - Up to 22Mbps in 2500 HomeRun WiFi surfspots. No limitation on data.
- 3GB/month for 22€/month (17€ if you also have fixed broadband)
- 2.5€/day with 3.5€/month subscription fee (max 40€/month)
- 10€ for a week (Max 2Gb)

Fixed user behaviour moves into moving laptops



- Speed addiction

Bring the fixed behaviour to the mobile

- SurfOpen

- Navigation and favourite buttons



Back and forward buttons



Favourites



Go to a URL address



Search engine



History



Home – Telia SurfPort



Main page – main page of the visited site



Login page – gives the login page of the visited site



Zoom – Miniature of the web page



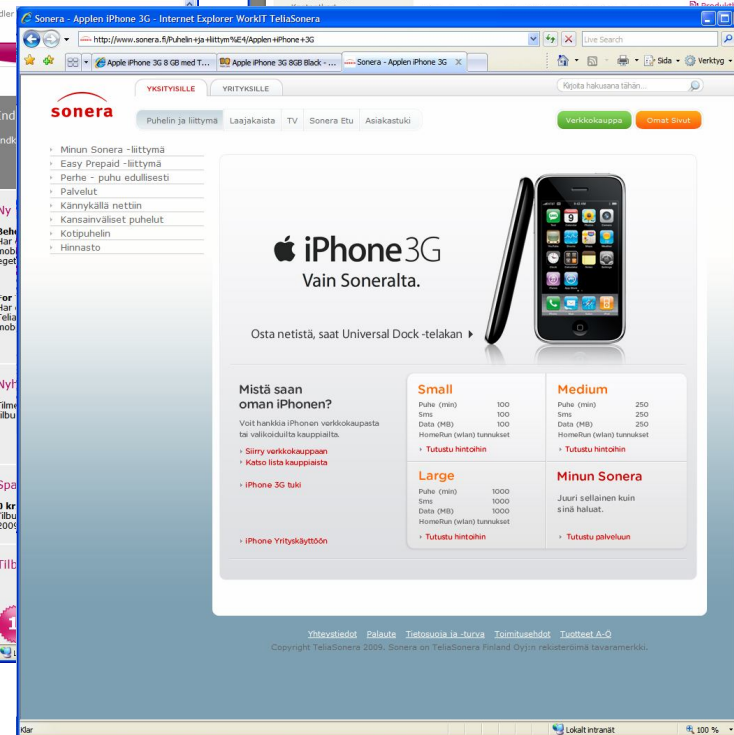
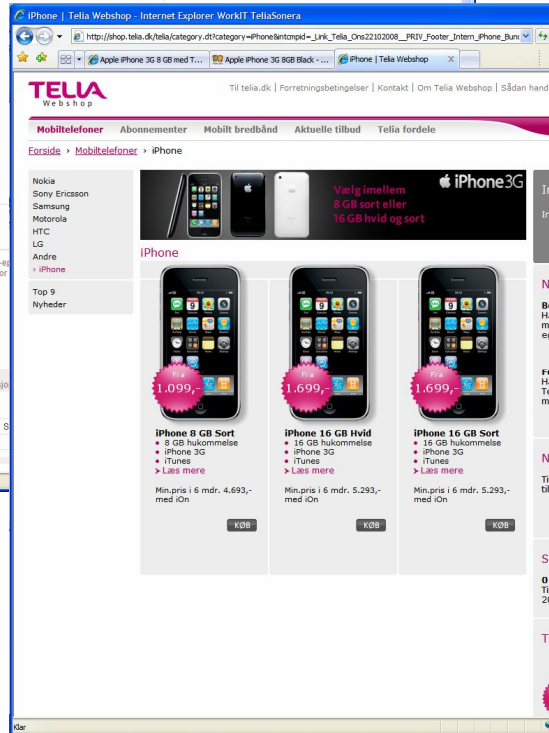
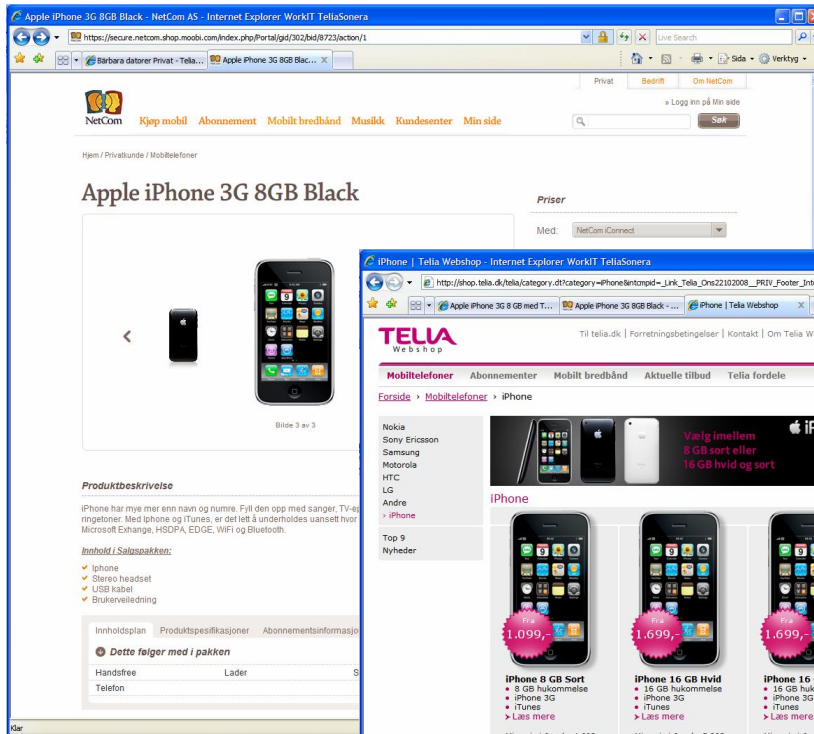
RSS feed



- Most used Surfport service (more than twice as big as the second)

- Six times more users click on adds

iPhone



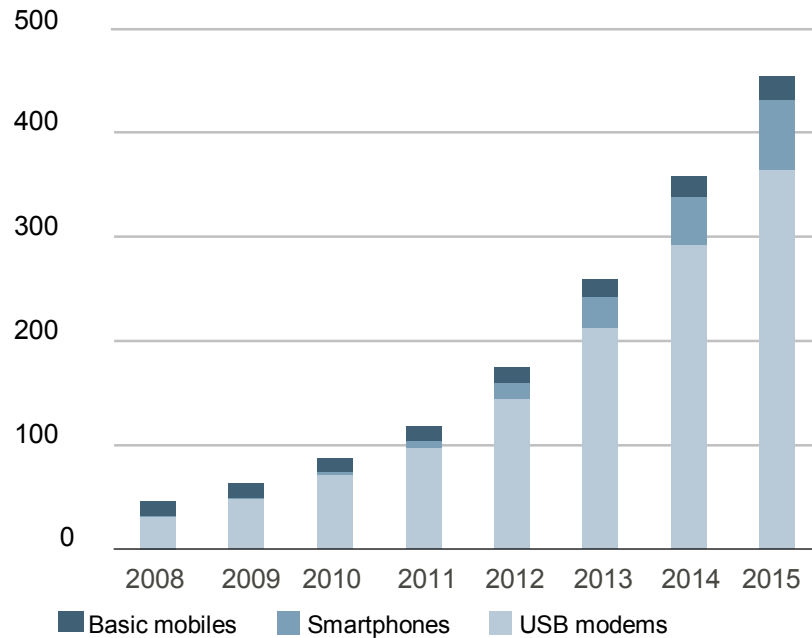
4G LTE

The Nordic and Baltic
telecommunications leader 

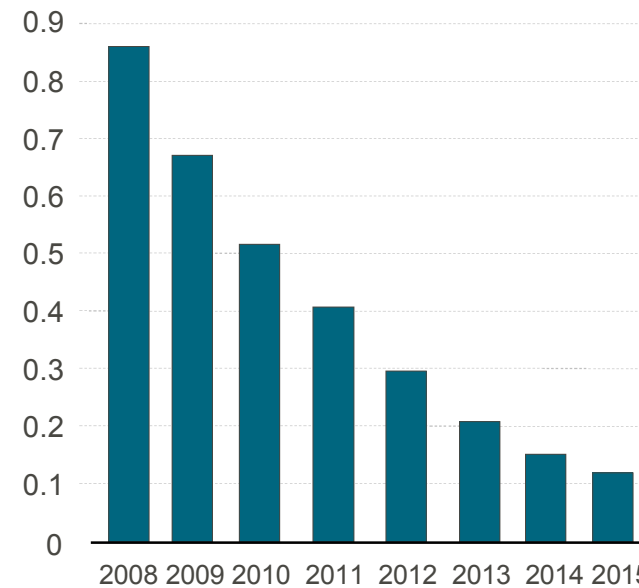
TeliaSonera

Mobile data

Mobile traffic per customer by device (Mb/month)



Revenue / Mb (USD / Mb)



- Fixed broadband subscription model: higher speed - higher charge
- Mobile broadband subscription model: higher speed - same charge

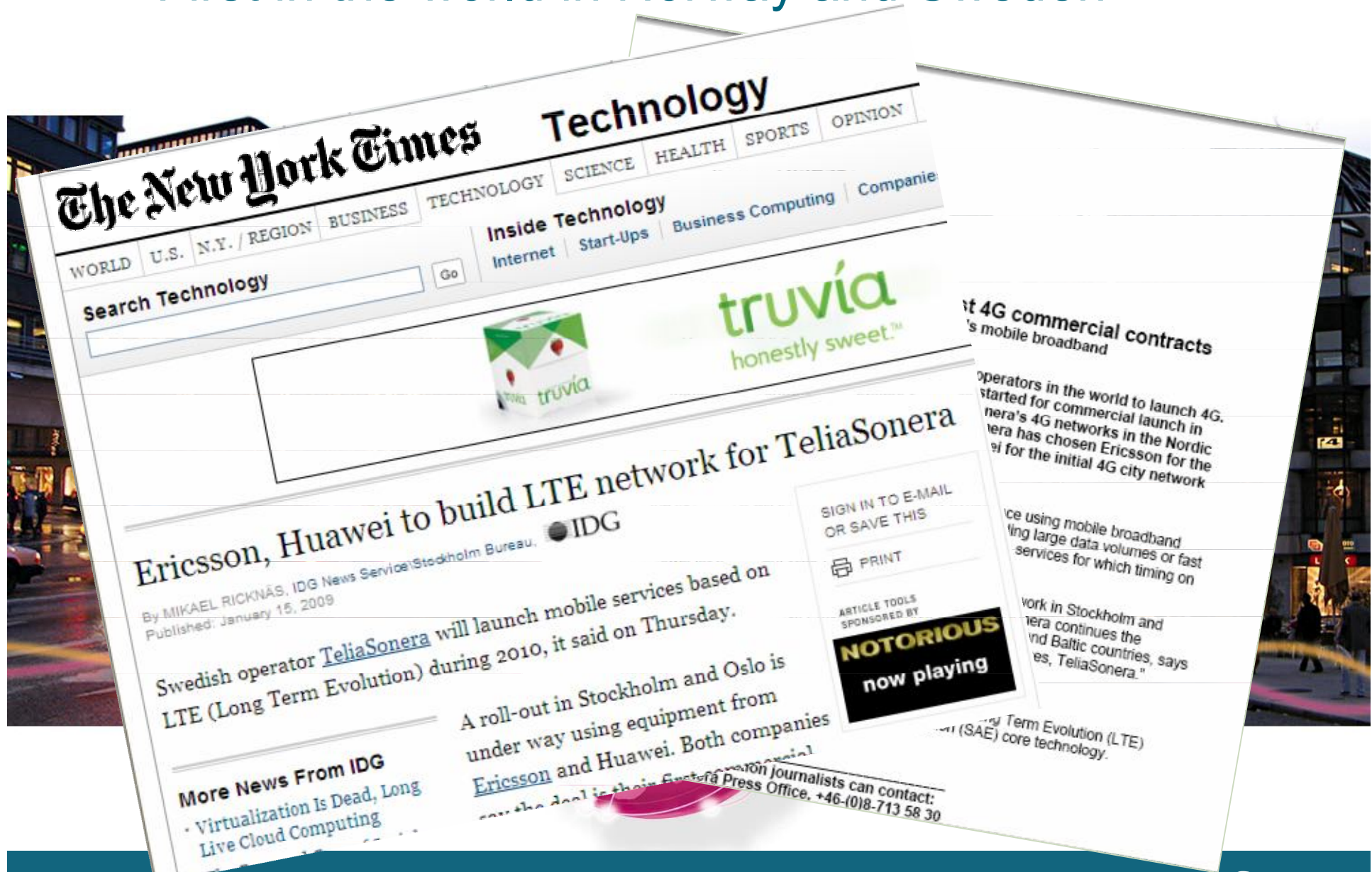
- Capacity need could be 100 times greater within 5-10 years
- No adequate RoI to account for needed capacity in the longer term

Source: Analysys Mason, Wireless network traffic 2008-2015: forecasts and analysis A-focus, Scenario analysis – future spectrum capacity demands. 2008

Higher data speeds creates new possibilities



First in the world in Norway and Sweden



Roll-out of 4G already started

- 80% of the site rental agreements are ready
- First commercial 4G-base station in place for testing
- Re-use of existing infrastructure
- Launch in Sweden and Norway early 2010
 - Covering Oslo and Stockholm



4G Strategy and goals

- Market and User perspective
 - Early: One of the first in the world
 - TeliaSonera shall offer the best user experience
 - TeliaSonera shall take the position as market leader in Mobile Broadband
- Technology perspective
 - TeliaSonera has chosen the 3GPP technology track
 - The network shall offer High Capacity and Low cost per Mbyte
 - Phase 1: Overlay network with data only
 - Phase 2: Integrate with existing 2G/3G/WLAN, and Voice also in 4G

4G

Ready!

