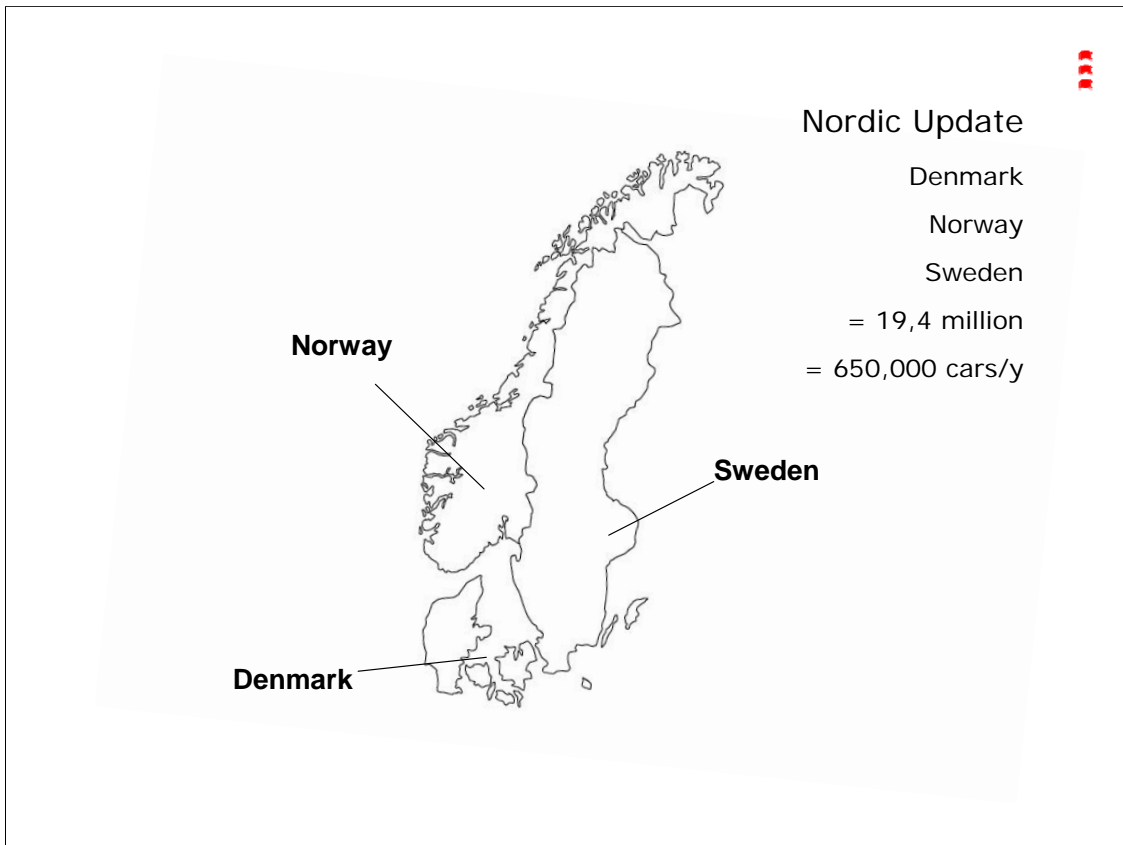




TERACOM 

Digital Radio
Nordic Update

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A Nordic update

Covering not only Sweden but also Denmark and Norway

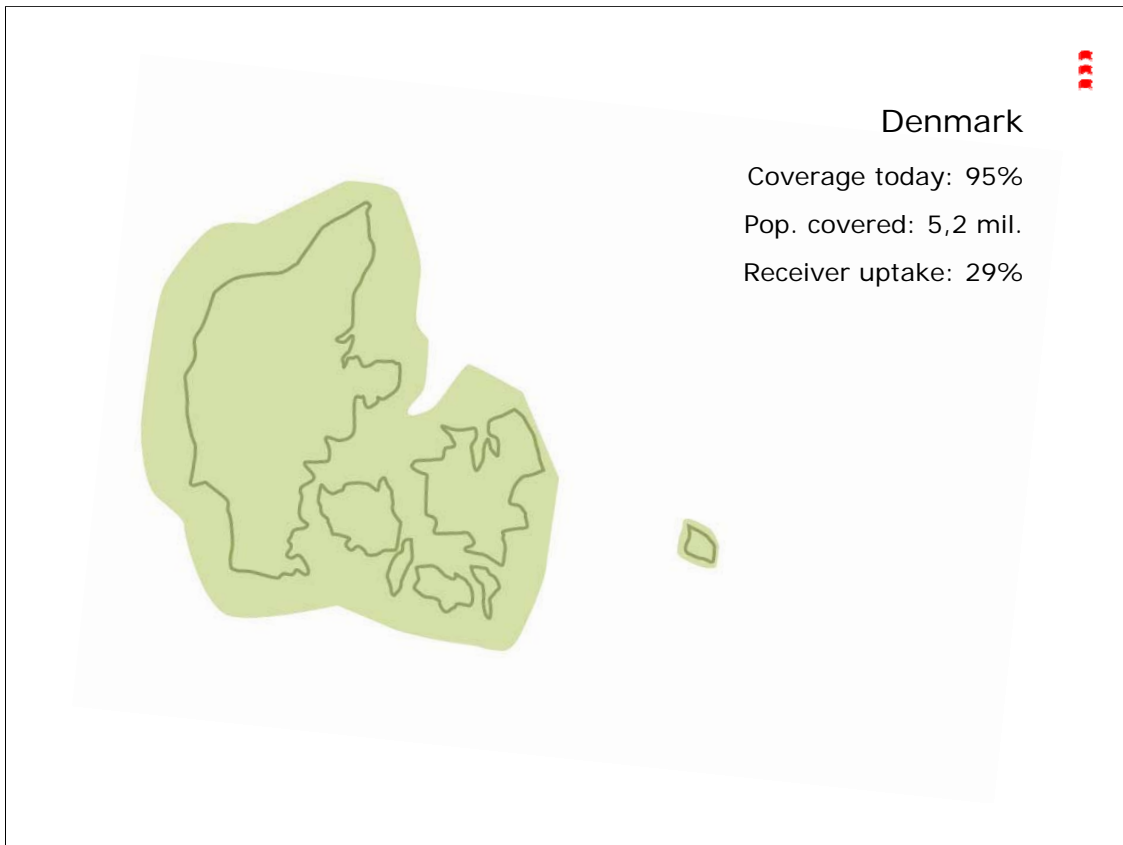
A market that when combined and measured by new vehicle registrations counts as the 6th largest in Europe

We are only beaten by the big five; Germany, France, Italy, UK and Spain.

More than 19 million people and almost 650,000 new vehicle registrations per year.

Stats from AECTA **New Vehicle Registrations 2008 - By Country**

Denmark	191 605
Sweden	301 459
Norway	153 247
=	646 311



Denmark has a thriving DAB Digital radio market and is leading the Nordic region in this respect.

With the second highest penetration of receivers per household in the world, Danish authorities are considering a digital migration plan leading to the switch-off of main FM services.

Denmark has two national DAB multiplexes providing 95 per cent outdoor coverage. Meaning 5,2 million people covered and one of every third dane or more than 29% has a DAB digital radio.



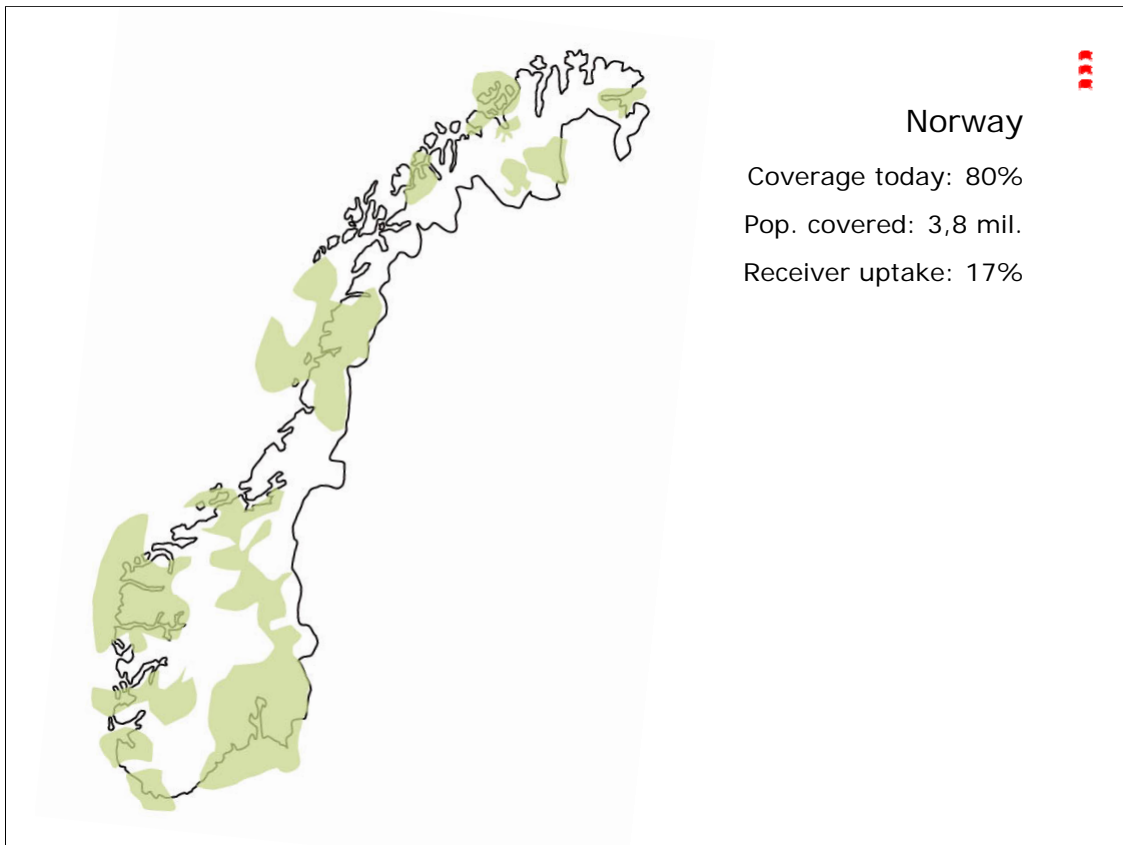
Denmark is one of the few countries that did not oblige its broadcasters to simulcast FM programmes on DAB.

Instead, Danmarks Radio split the programming on its four FM channels into eight thematic DAB channels.

This has turned out to be very popular. Together with programmes from the commercial broadcasters the listeners can now access around 18 digital channels - whenever they want. 12 of these are DAB-only channels, 15 are public service programmes and 3 are commercial programmes.

Future plans in Denmark involve more content, there are discussions to take available regional frequencies in use for additional digital radio services. Plans also involve more coverage, especially so called indoor coverage.

23 % of the Danes who haven't already got one, are counting on buying a DAB radio in 2009



Norway is one of the few countries to have set a date for the switchoff of analogue radio.

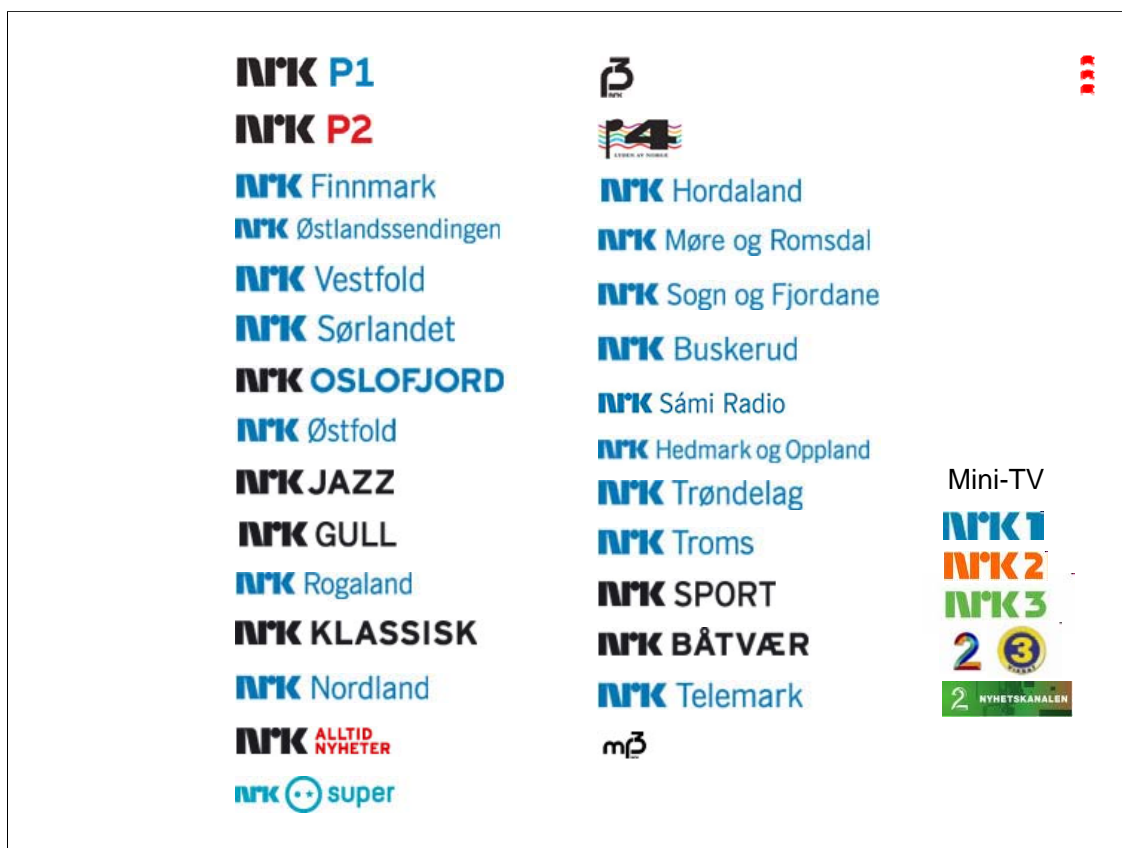
However, this will depend on the take-up of DAB in Norway.

Authorities and broadcasters agree that at least 50 % of the population should have a digital radio set before the planning of migrating the main FM services to digital only can start.

The penetration of DAB receivers in Norway is now 17 per cent and is gradually increasing. Penetration will probably be boosted by the recent launch of miniTV – the new mobile TV service covering Oslo, using broadcast technology based on the Eureka-family of DAB-standards.

So, the norwegian DAB networks does not only deliver audio channels but also 6 mobile tv channels from public service and commercial broadcasters.

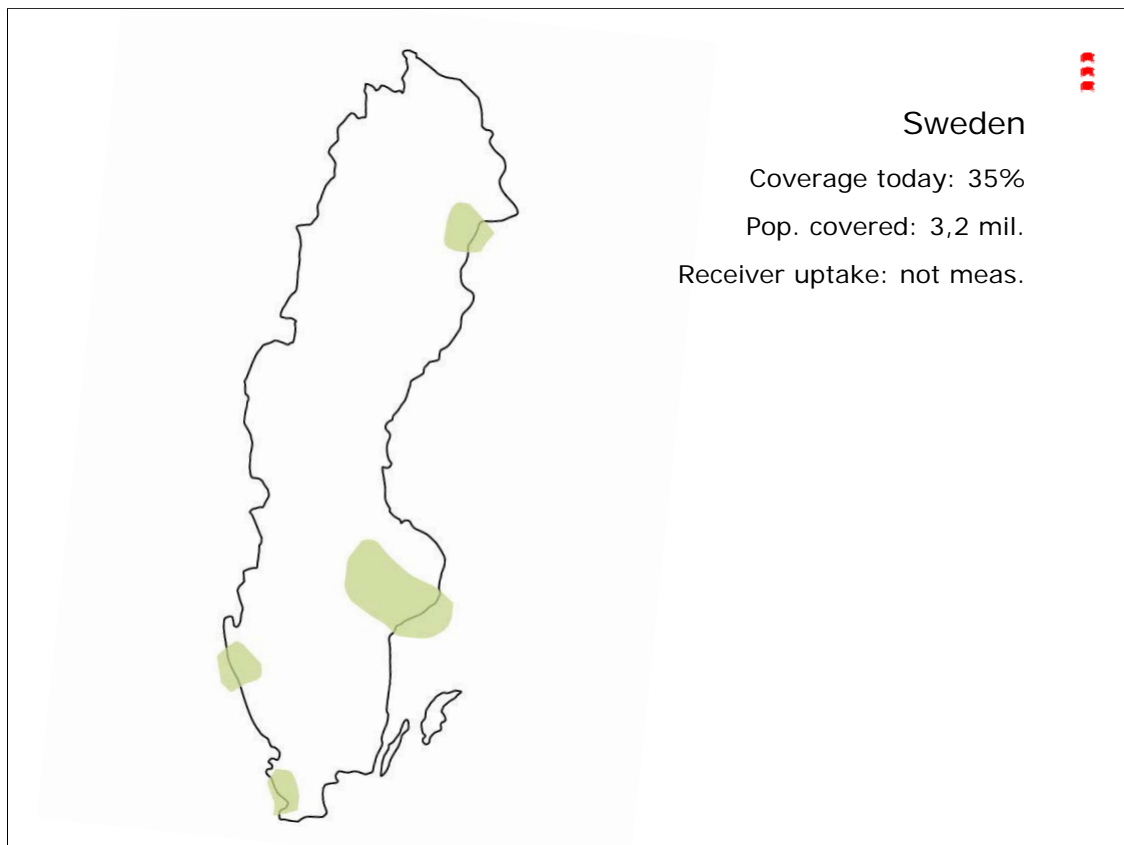
A splendid service offering. Especially for cars, dont you agree?



There are currently two multiplexes in Norway, one national and the other regional (split into seven regions) providing approximately 80 per cent population coverage.

All in all there are about 30 audio programmes and 6 mobile-tv services on air in Norway.

Future plans involve more coverage, up to 95 % within the next couple of years (planned for 2012-2014), and even more content.



So to Sweden, the black sheep in the crowd with only 35% of the population covered by DAB networks today.

However, it is most likely that the future of digital radio in Sweden will be clearer during 2009. There is now a strong industry consensus – among both public service and commercial broadcasters - for a re-launch of digital radio via DAB+. And there are positive signs from the Swedish government to sanction such a re-launch.

As a network operator, Teracom is investing in the future. We have recently provided the means for the broadcasters to try out new ideas and programming in a digital DAB+ network. We will provide room for around 16 DAB+ channels covering three larger cities and approximately 20 per cent of the population.

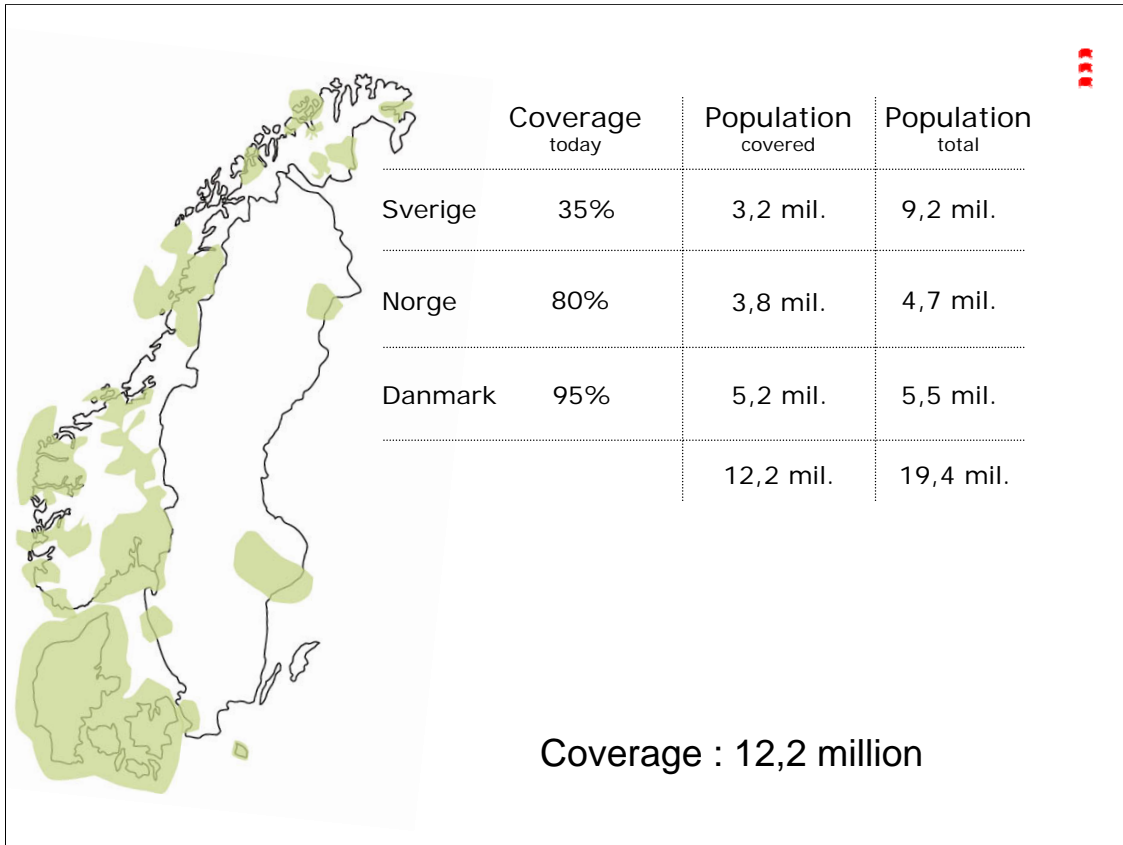
Toghether with partners from the receiver and retailer industry, we will provide hundreds of receivers to a carefully selected focus group of listeners. We expect this project to be the stepping stone to a re-launch of digital radio in Sweden.



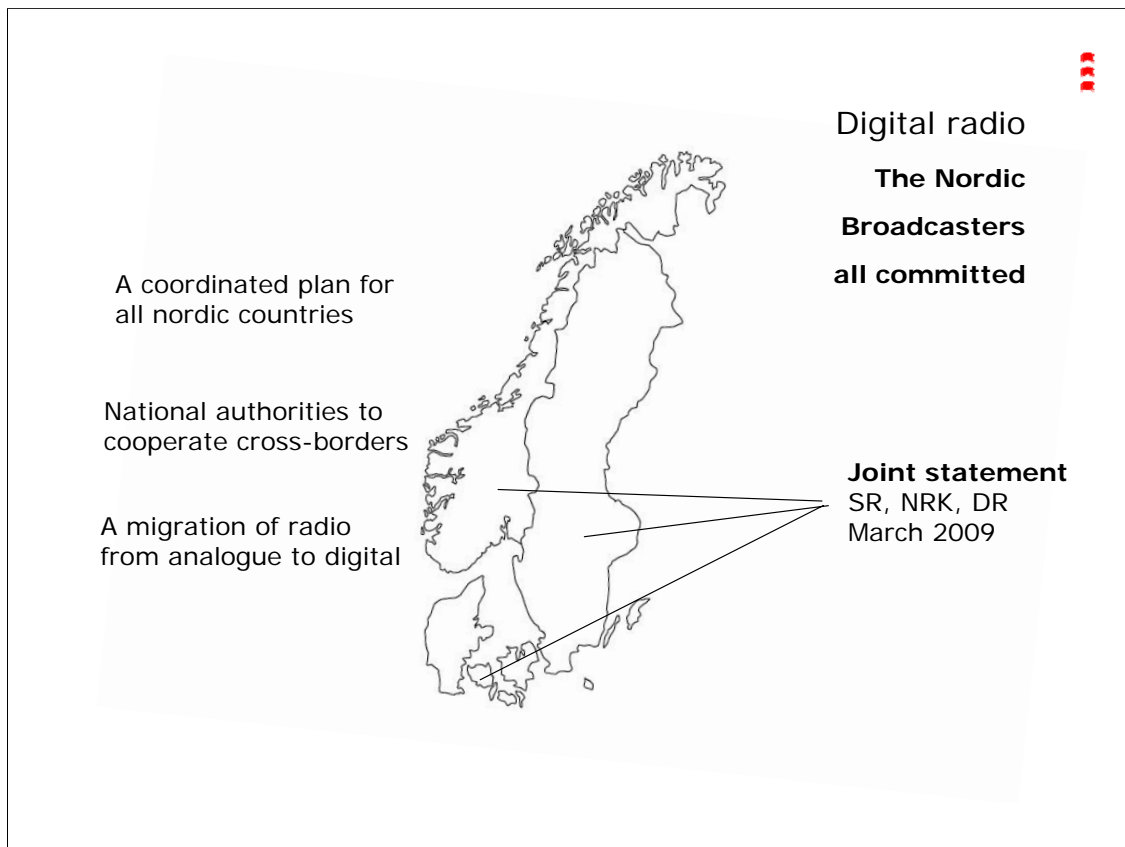
In the same manner as our neighbours, Sweden is focusing the next coming years on more content and better coverage.

Today Swedish Radio is broadcasting seven digital-only channels on DAB. Recently the commercial broadcaster MTG Radio is also providing content to the platform. More content will follow as the regulation becomes clearer.

By the end of this year – we predict this new legislation will be in place in Sweden allowing for broadcasters to go digital on good long-term conditions .



All in all today, a combined coverage equal to 12,2 million



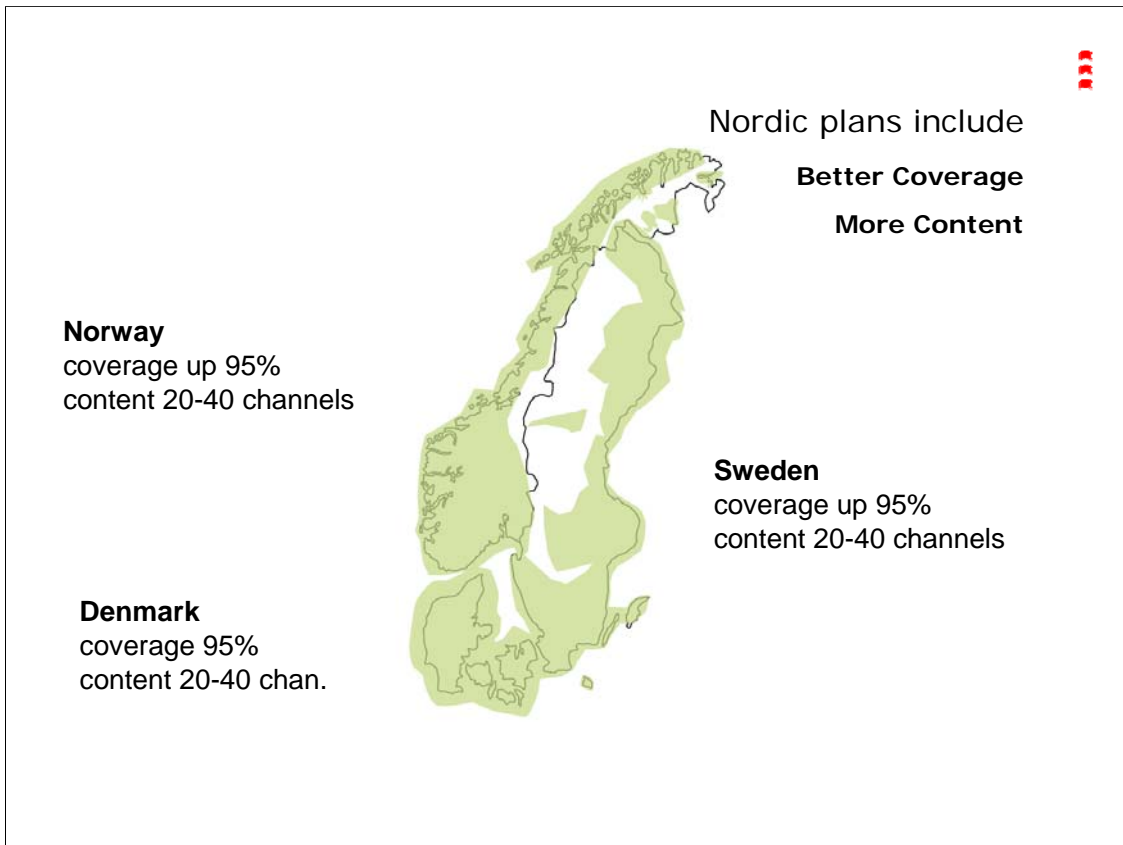
The availability of new DAB+ enabled radios – hopefully in cars - plus the increasing momentum in countries such as Germany and France will no doubt help to further push digital radio in Scandinavia.

In march this year the public service broadcasters Swedish Radio, NRK in Norway and Denmark's Radio issued a joint statement aimed at the authorities and governments of the nordic countries.

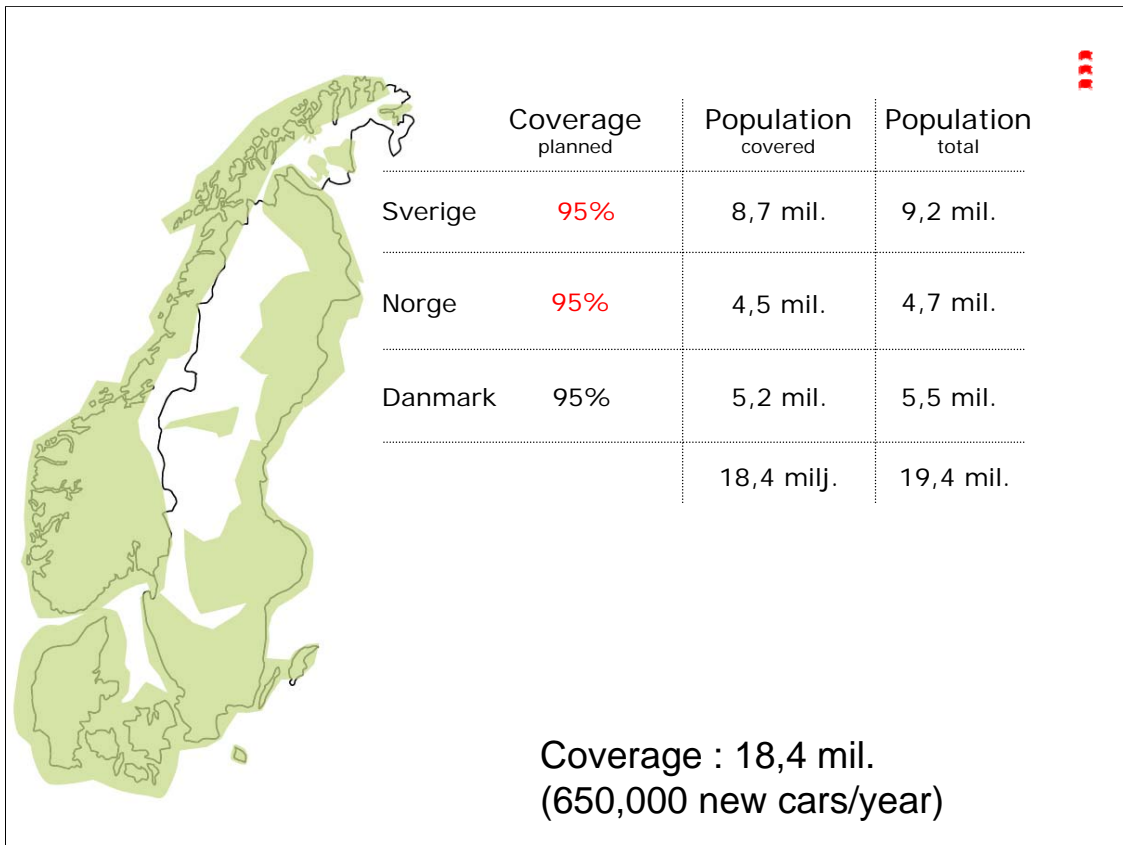
They called upon a coordinated plan, co-operation cross borders, and a common nordic strategy for an analogue to digital migration.

The message cannot be much clearer than this:

The nordic broadcasters are all committed to DAB digital radio.



Summary, next couple of years will see more content and better coverage



12 or 18 millions people covered and listeners with modest expectations: being able to listen to the same radio channel in their car as they recently heard on their kitchen radio.

Services in common



- DAB/DAB+
- DLS radiotext and EPG
- Slideshows and BWS
- TPEG and service following
- ..using Scandinavian characters....

Two final slides to summarises the services and applications that we have in common, that are being broadcasted today.

Among them is TPEG, the Traffic and Transport protocol.
And Service following, FM-DAB and DAB-DAB.

We believe this features to be most important for the implementation of receivers in the car.

Advice to car manufacturers



- **Implementation of Profile 1 receivers as standard in all models and all cars**
- **Implementation of Profile 2 receivers (TPEG, EPG) in suitable models (screens)**

...and dont forget Scandinavian characters

So our advice or wishlist to the manufacturers is:

The immediate implementation of profile 1 receivers as standard, in all models and all cars.

Suitable models, those with screens and navigation etcetera, need to be equipped with TPEG.

..and dont forget our scandinavian charachters 😊



Digital Radio
Nordic Update

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What the listeners want

- Easier tuning: 45 %
- Higher audio/rec. quality: 40 %
- Graphical traffic info: 38 %
- More radio channels: 35 %
- Record/rewind/play: 33 %

- Listening share, in Cars: 79 %
- Listening share, in Home: 79 %
- Listening share, at work/school: 49 %
- Listening share, portable: 15 %
- Listening share, other places: 10 %



Recent survey, extra material

What the listeners want



Standard fitted DAB digital radio (seen here in a VW GOLF)

VW Golf example from Norway, important to have standard fitted models.