Trondheim city experience

Implementation path and process undertaken

Anders Stenseth

Norway Post, Trondheim

Contents

- Trondheim
- Norway Post Group
- «CO2-free post distribution in Trondheim city centre»
  – the project
- Further work and plans
- Experiences

Trondheim

176 348 inhabitans 31.12.2011

Founded in 997 a.c.

3 trd biggest town i Norway

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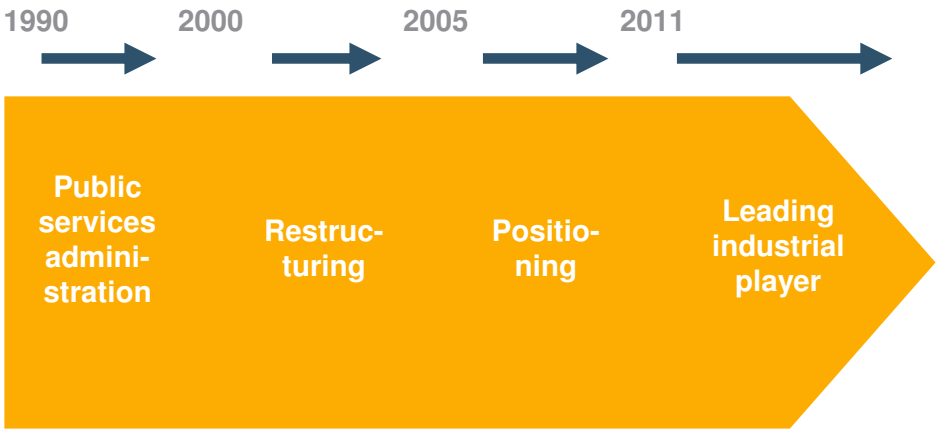
Norway Post in short



POSTVERKET

posten

posten bring

- Group revenue: 22.5 bill. NOK (2.9 bill. Euro)
- EBIT: 943 MNOK (120 MEURO)
- 20.000 employees
- 2 main business areas:
  - Mail
  - Logistics
- Nordic Region as home market
- 26.5% of total revenue from subsidiaries outside Norway
- Subsidiaries in: Sweden, Denmark, Finland, Estonia, United Kingdom, Holland, France, Greece, US, Hong Kong

The group is a significant post and logistics provider – environment is one of the group's two CSR areas

The group has established ambitious goals where carbon management is the key

Parameter	Goal
CO2 emissions from transport	Reduce by 30 % within 2015 (2008 baseline)
Enery use in buildings	Energy consumption reduced by 15 % within 2015
Waste	91 % of waste recycled by 2015

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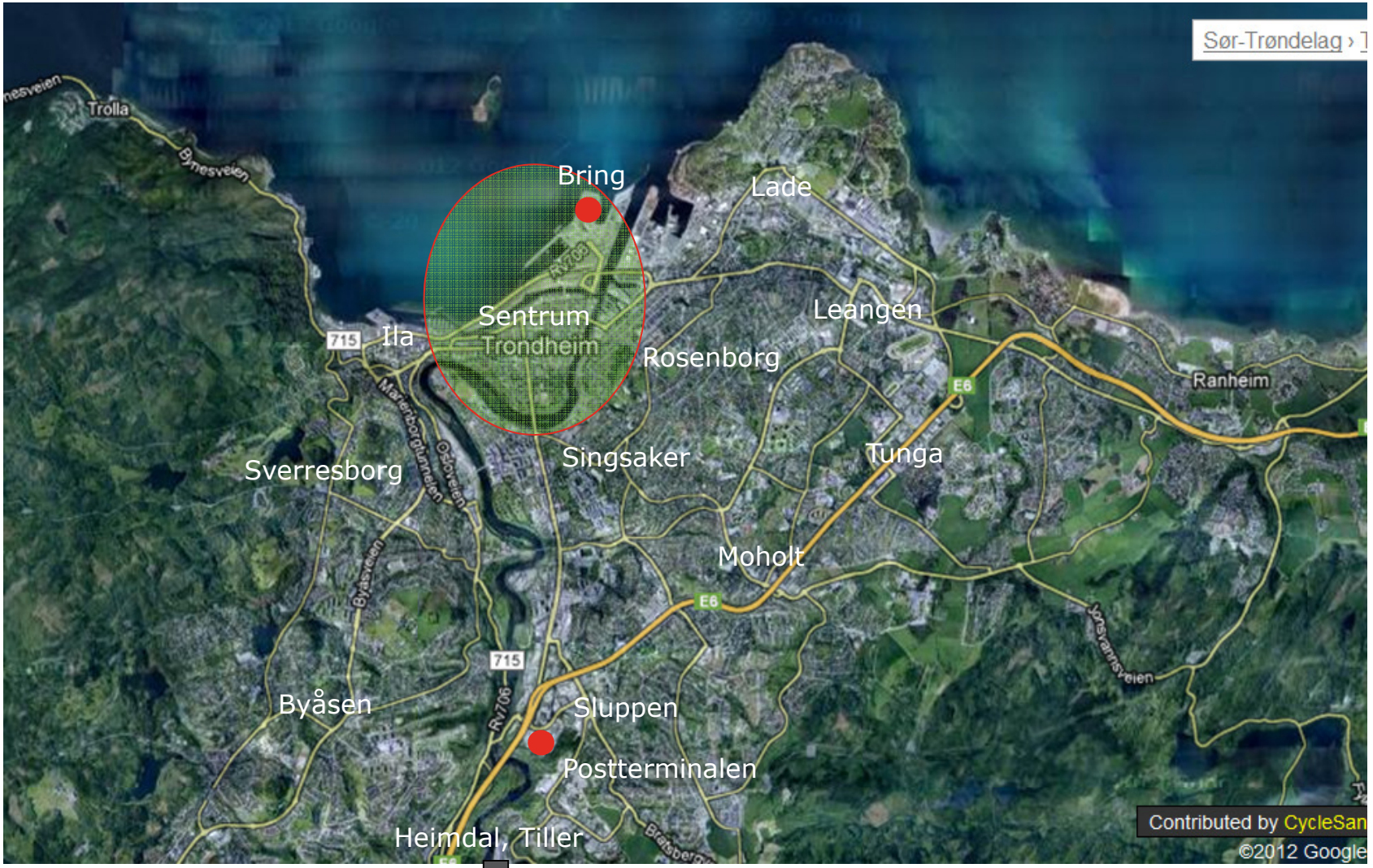
Background of the project

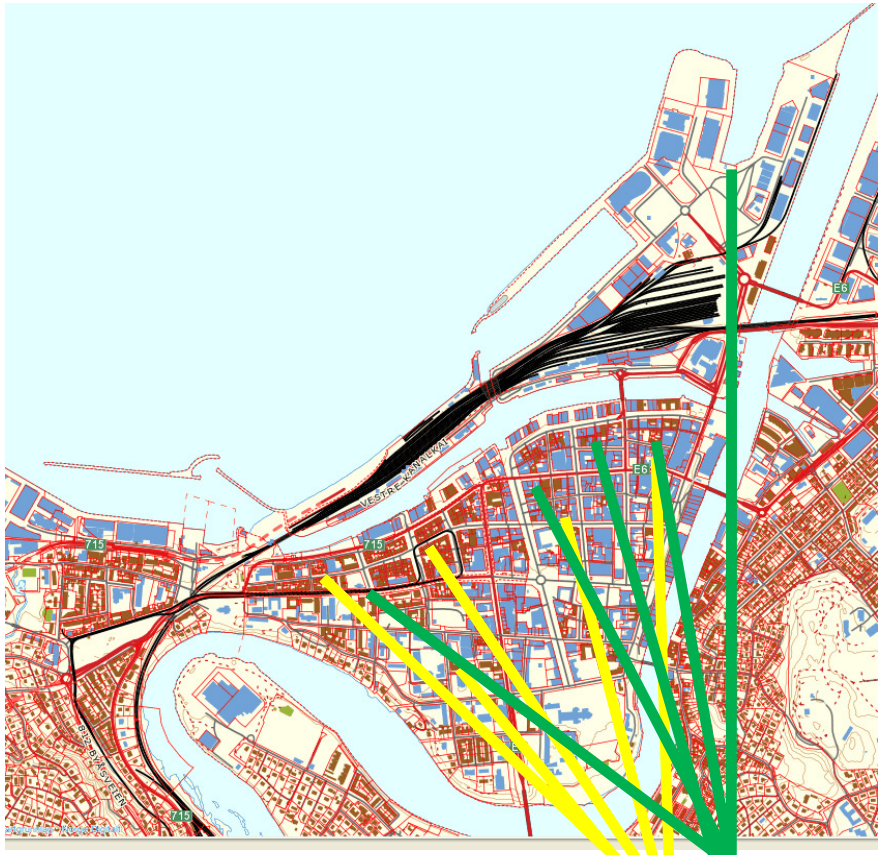
- Clear goals on reduction of CO2 emissions in Norway Post Group
- Ambitious goal of cuts in carbon dioxide emissions in Trondheim municipality
- Reduced availability for goods delivery in Trondheim city centre
- Reduced incomes and cost cuts

Trondheim city center

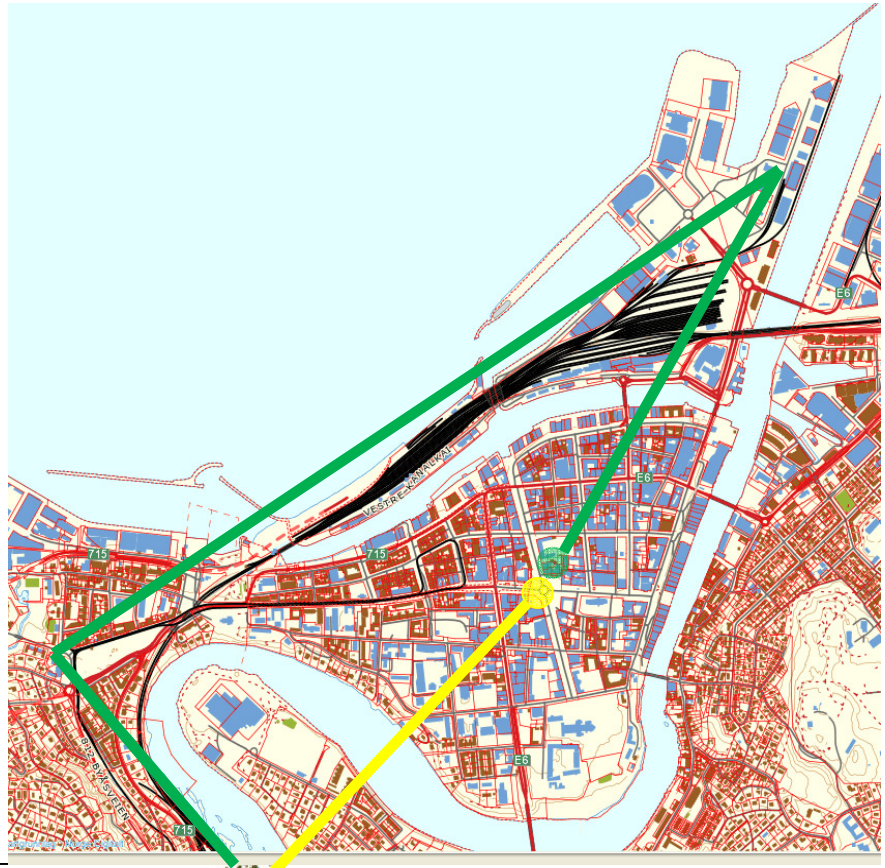


Logistics solutions

Winter 2010



Scheduled for autumn 2011



Mail delivery

Parcel distribution

Trondheim postterminal
5 km south of Trondheim.

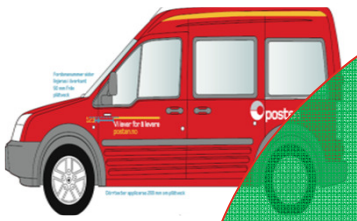
New eco-friendly equipment

Winter/spring 2010

Delivery of snail mail

May 2012

5 diesel/gasoline vehicles

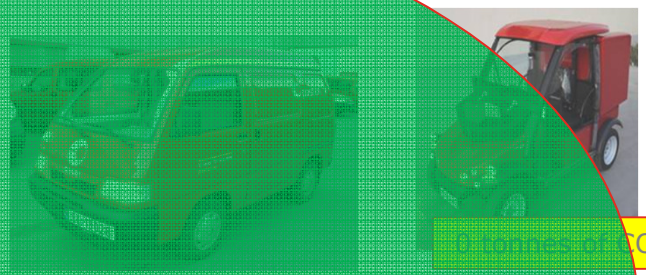


Ca. 7 tonnes of CO2 emissions per year

2 electric trolleys

2 el-jeep

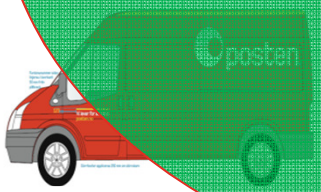
1 Piaggio Porter electric van



CO2 emissions per year;

Approximately 73% achievement

6 diesel/petrol cars



Ca. 23 tonnes of CO2 emissions per year

2 Goupil G3 (e)

1 Goupil G5 (e)

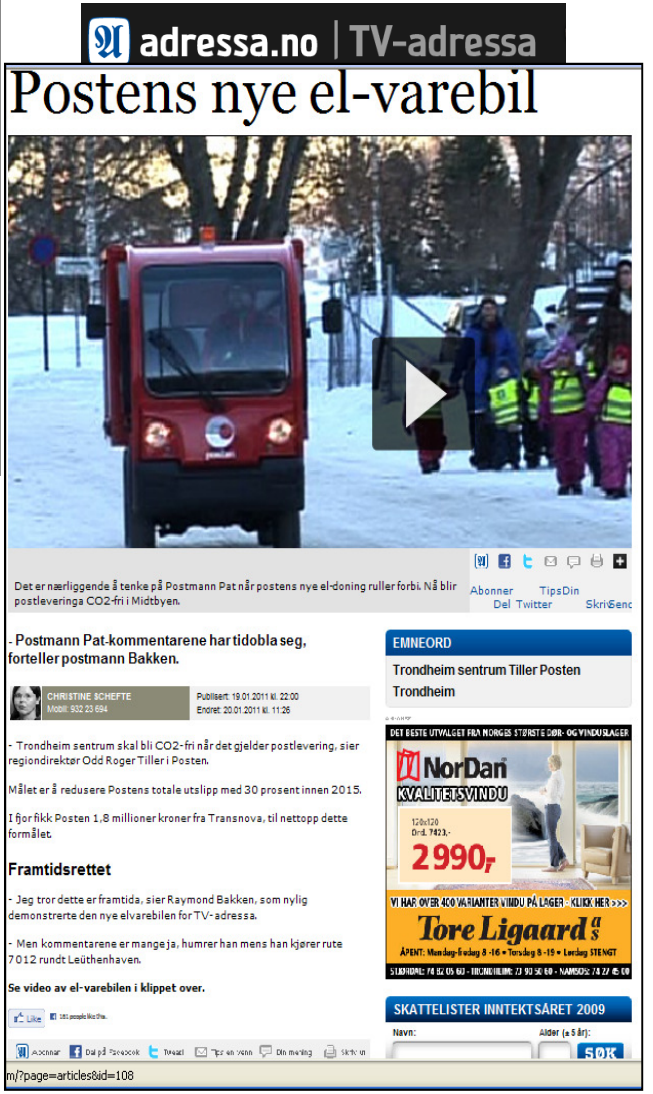
1 Iveco Daily Hybrid electric-diesel

2 petrol trucks

Ca. 8 tons of carbon emissions per year

Attention in media

Norwegian transport minister on visit



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More eco-friendly vehicles

Volvo FE Hybrid Diesel/Electric

Hybridlastebil gir enda mer miljøvennlig levering i Trondheim

AV SIGNE STEINNES | 28. NOVEMBER 2012 |

Posten i Trondheim har nå tatt i bruk landets første hybridlastebil. Det gjør distribusjonen i bykjernen helt CO2-fri.

November 2012

Den nye hybridlastebilen distribuerer paller i sentrumskjernen ved hjelp av elektrisitet. Så snart den er ute av byen, kobles en vanlig dieselmotor inn. Her med transportleder Arve Fjærli. Foto: Thor Nielsen

I midten av oktober fikk Posten i Trondheim overlevert landets første hybriddrevne lastebil, en Volvo FE. Lastebilen skal brukes til palledistribusjon i Trondheim sentrum. Siste tilskudd til Postens miljøvennlige bilpark gjør at Hjertepromenaden, sentrumskjernen i Trondheim, nå har CO2-fri distribusjon.

Testing biogas vehicles

4 electric Mercedes Vito el ordered for delivery spring 2013

New mail-distribution structure in Norway post

Specially designed el-vehicle for Norway Post


Om kort tid vil denne rulle rundt i bybildet på Østlandet. I går kveld fikk Postens nye budbil *Paxster* Hedersprisen for god design.

Dette er fjorårets beste design

New mail distribution structure in Trondheim municipality from March 11th

Januar 2013	Number		Mars 2013	Change
Express el-trolley	3		3	0
Piaggio Porter el	1		1	0
Goupil G3 (el)	1		1	0
Commarth (el)	10		34	+ 24
Diesel van	91		43	- 48

- 594 000 km. pr. år. **- 174 tonn CO2 pr. år**

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Learning points

- Everyone supports positive effects on environment
  - Although there is a threshold for employees who are used to ordinary good standard cars to change to more simple vehicles like electric mopeds and trolleys
- Less access for big vans and trucks in the city centre means small vehicles
  - Truck drivers prefer trucks instead of electric vans.
- Economic support from Transnova was extremely important for the project
- There is a small selection of electric-driven vehicles and trucks
  - Electric vans and trucks are expensive
  - Small electric vehicles is cheaper than diesel/petrol cars
  - The best way for eco-friendly solutions for vans and trucks seems to be biogas
- Vehicles developed as electric vehicles seems to be less solid than cars equipped with electricity
- Study visits with representatives from management, employees and union was very useful

Eco-friendly vehicles used in Trondheim

Expresso Electric Trolley

Electric trolley for distributing mail in downtown areas. Truck pushes curbs up to 25 cm.
Speed 8 km/h and 4 km/h ahead reverse.
Load capacity is 150 kg.

Commarth Electric Jeep

El-jeep intended for execution in block buildings and downtown districts (Park and loop).
Speed up to 40 km/h. Range 50 km.
Load capacity 200 kg and 100 kg behind the front.
http://www.comarth.com/en/

Goupil G3 and G5

Electric cars intended for distribution of parcels.

G3:
Load capacity from 2.2 to 3.4 m3. Speed up to 40 km/h.
Range from 60 to 100 km. Charging time 8 - 10 hours

G5:
Load capacity up to 6 m3. Speed up 40 km/h electric, 70 km/h hybrid.
Range Electric 80 km, Hybrid 400 km. Charging time 8 hours.

http://www.goupil-industrie.eu/

Eco-friendly vehicles used in Trondheim

Iveco Daily Bi-fuel (Iveco)

Hybrid diesel – electric. Switches with switch from 30 - 90 km. pr.

Charging (recharged by diesel operation).
Speed 50 km/h. el. Load capacity 7 – 17 km3

http://www.micro-vett.it/veicoli_en.php?C=8&V=14

Volvo FE Hybrid

Volvo FE with I-SAM (Integrated Starter Alternator Motor)
Power 120 kW
7-litre diesel engine
Volvo I-Shift gearbox

http://www.volvotrucks.com/trucks/uk-market/en-gb/aboutus/environment-new/volvohybridconcept/volvo-fe-hybrid/Pages/default.aspx