



TRAFIKVERKET

Digital Winter



Challenges

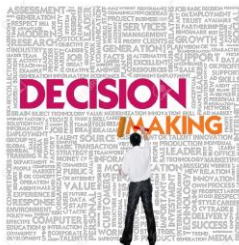
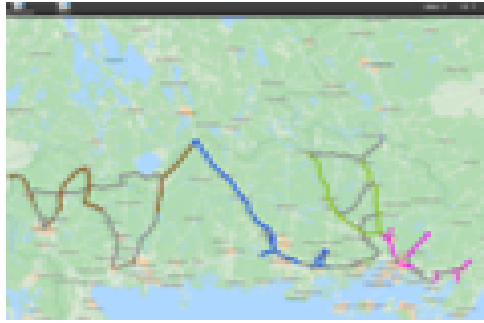
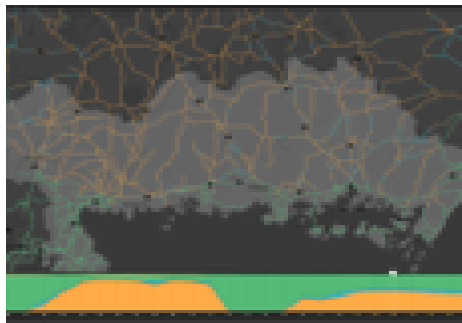
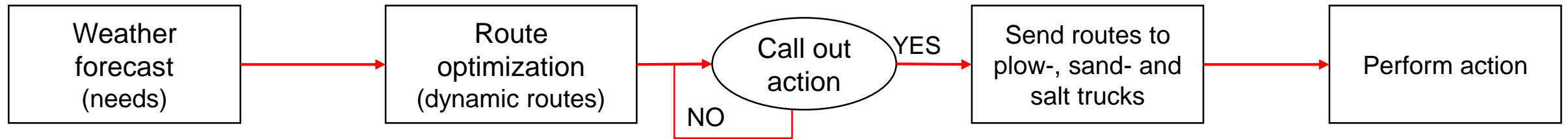
Correlations of effects



Measurement and follow-up



Contractors – Optimised ways of working



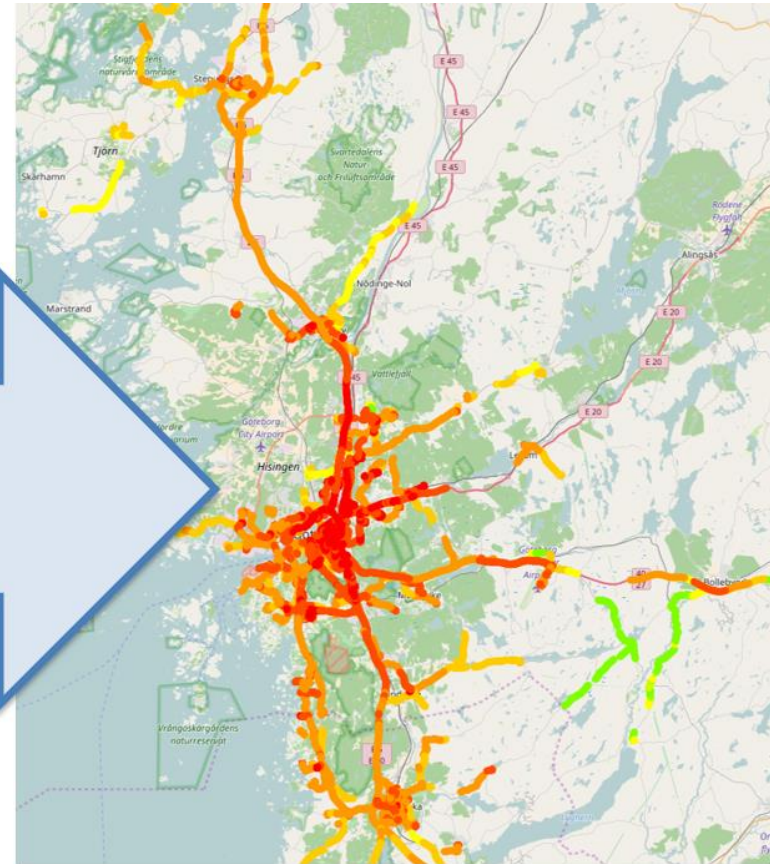
Yearly budget around 2 billion SEK

Vehicle data as a complement to point measurements

Static, one point



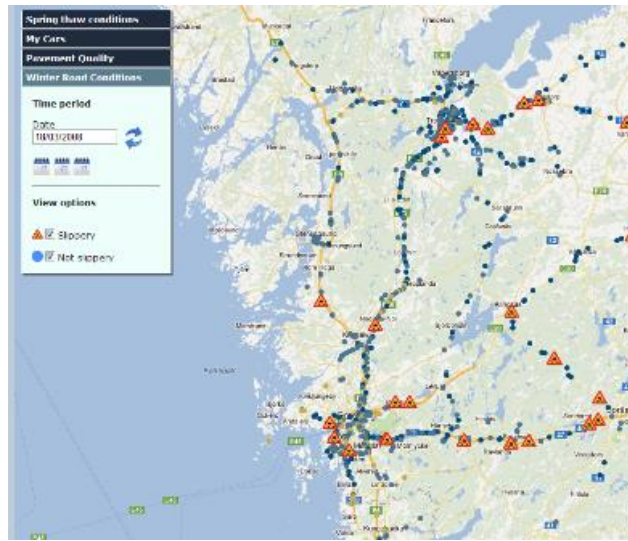
dynamic, road sections



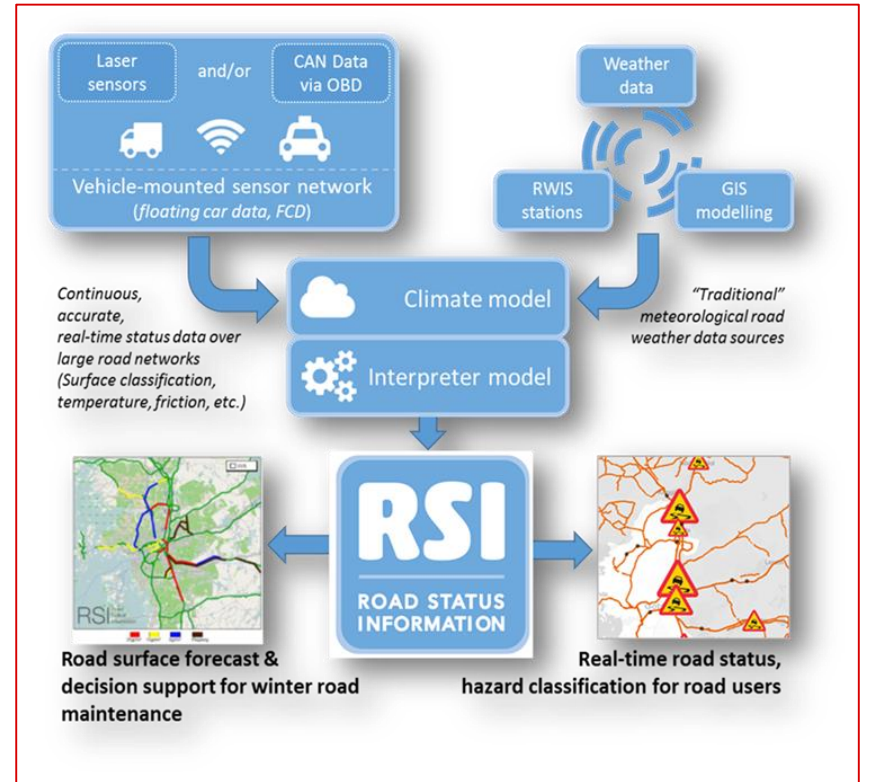
Development



VViS –
Status in 790 weather
stations
(of 100 000 km)



SRIS
Slippery Road Information System –
check status on the whole network,
but no realtime



Digital Winter – procurement to get status on the
whole network in realtime.
Merge of data from cars, algorithms,
weatherforecast.

1985 ————— 2007 ————— 2013-2016 ————— 2021 ————— →

Overview - Digital Winter

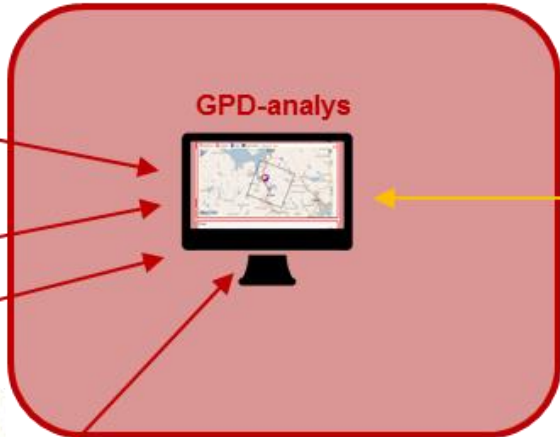
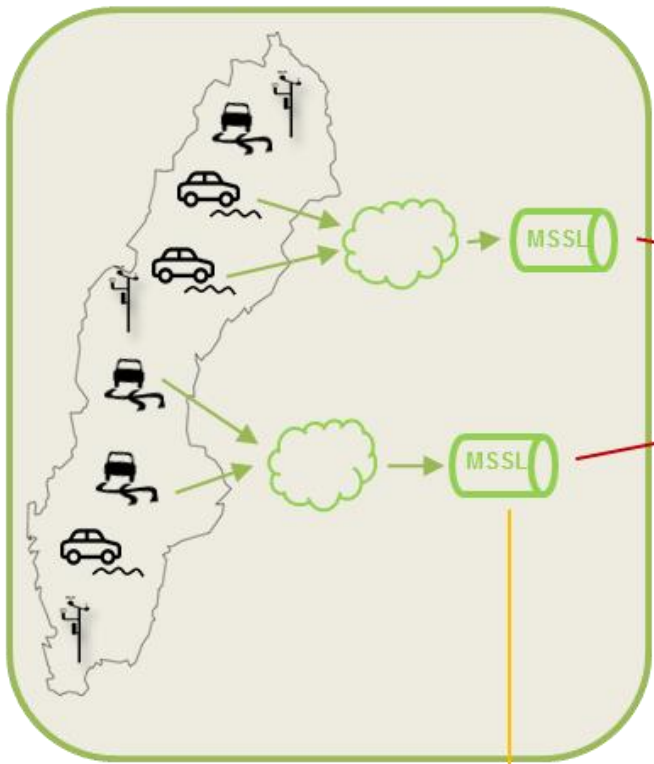


Data suppliers

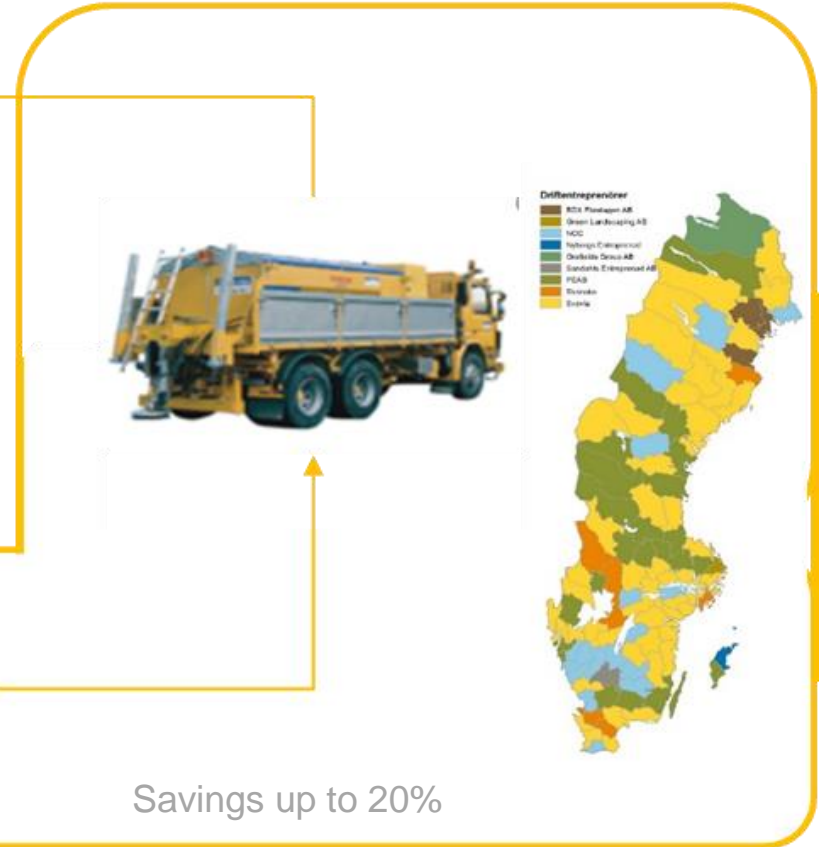
Old measurements 300 samples

Vehicle based 200 000 000 samples

Big data



Contractor



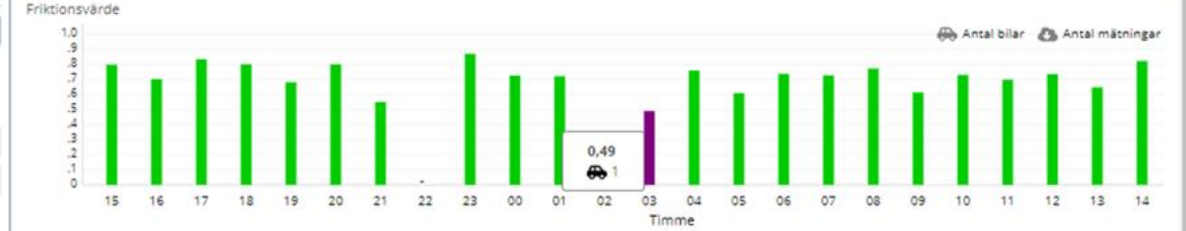
Decision support

Savings up to 20%

Visualisation and map



Segmentets friktion

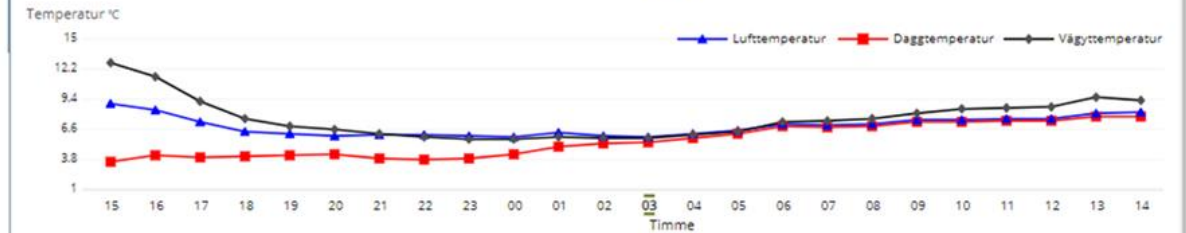
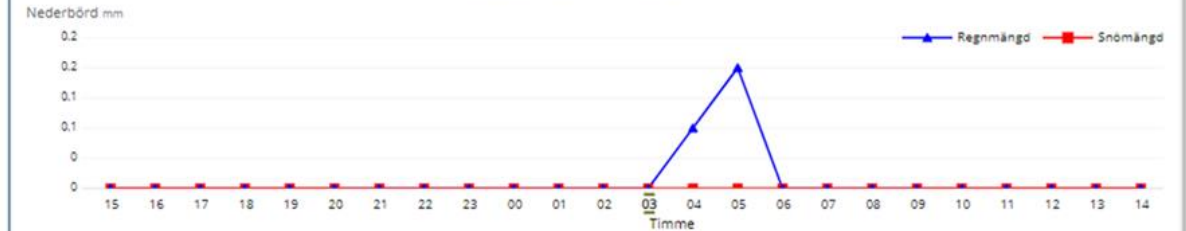


Åtgärder

Åtgärder saknas

Väderinformation

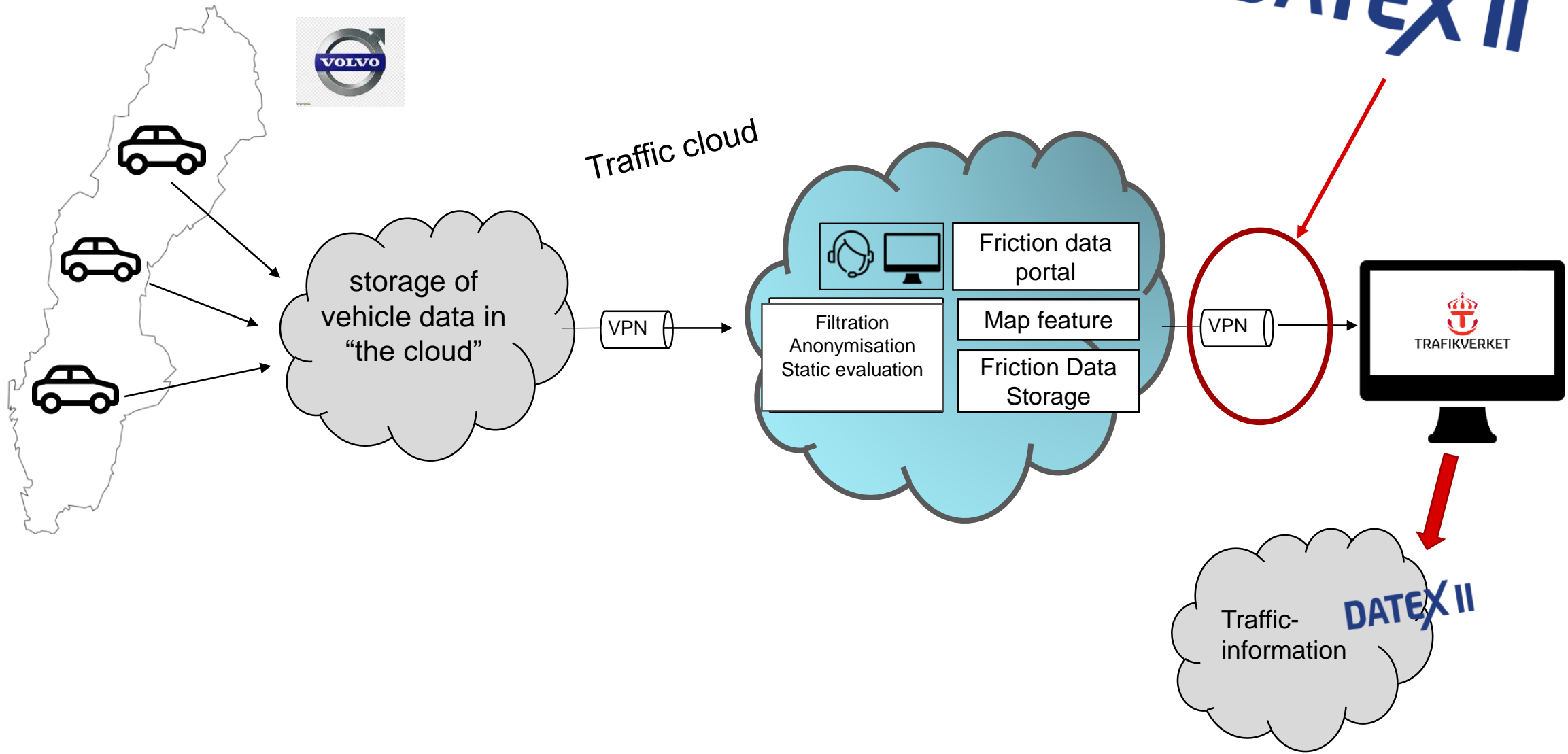
Mesanruta: 85 WVIS-stolpe: 1440



Väderutfall

Timme	15	16	17	18	19	20	21	22	23	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
Väderutfall	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Snösmängd (mm)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Regnmängd (mm)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,08	0,16	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Lufttemp. (°C)	9,00	8,40	7,30	6,40	6,20	6,00	6,10	6,10	6,00	5,90	6,30	6,00	5,90	6,20	6,50	7,10	7,00	7,10	7,50	7,50	7,60	7,60	8,10	8,20
Vägtemp. (°C)	12,80	11,50	9,20	7,60	6,90	6,60	6,20	5,90	5,70	5,70	5,90	5,80	5,80	6,10	6,40	7,30	7,40	7,60	8,10	8,50	8,60	8,70	9,60	9,30
Dagtemp. (°C)	3,60	4,20	4,00	4,10	4,20	4,30	3,90	3,80	3,90	4,30	5,00	5,30	5,40	5,80	6,20	6,90	6,80	6,90	7,30	7,30	7,40	7,40	7,80	7,80

Project – Digital winter



Coffee??