

SUSTAINABLE MUNICIPAL MAINTENANCE PLANNING WITH CONNECTED VEHICLE DATA

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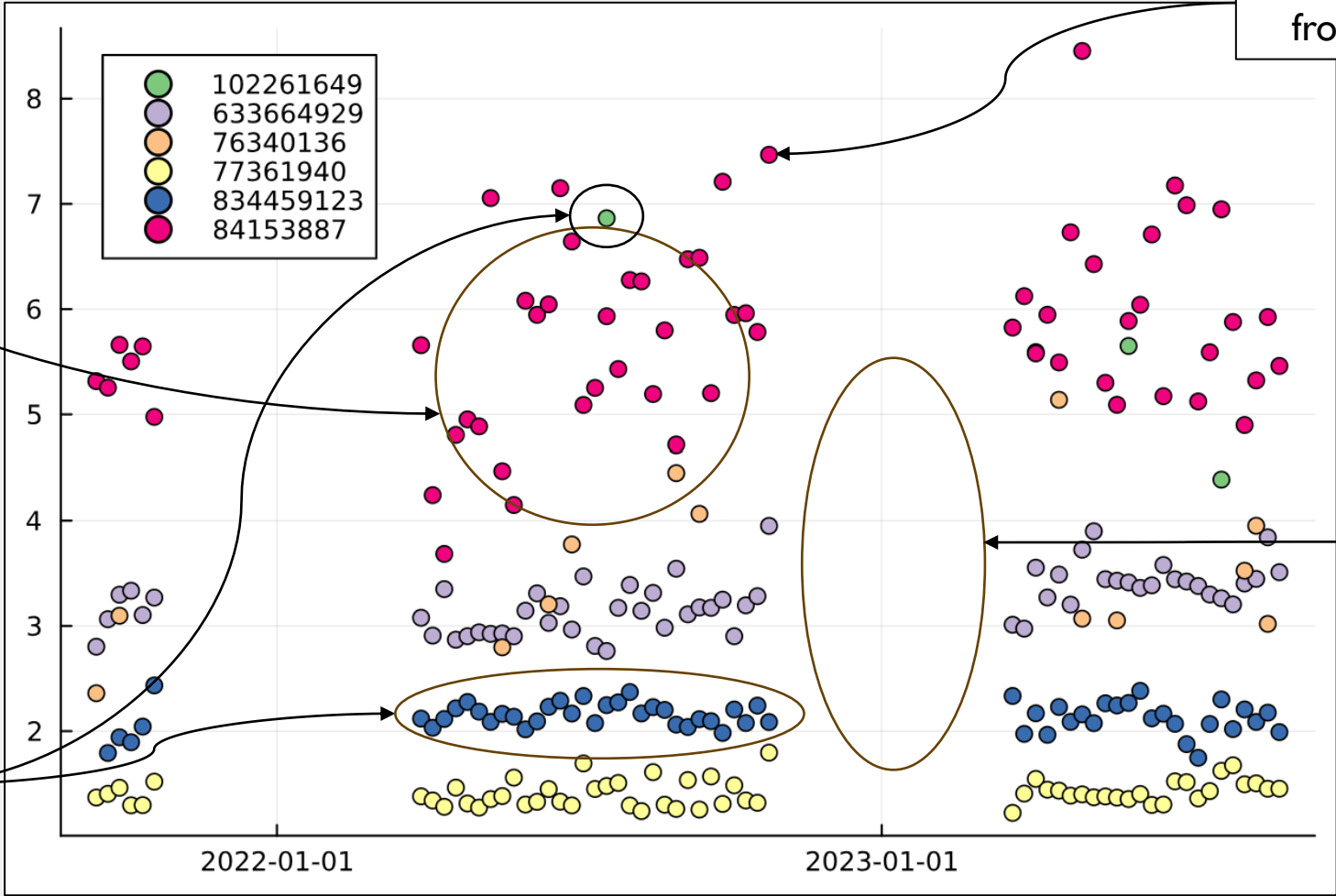
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ROUGHNESS DATA FROM CONNECTED VEHICLES

Weekly average roughness

Weekly within section measurement variation for a given year varies between 0.1 and 6 mm/m.

Section length varies from 3 m to 6 km.

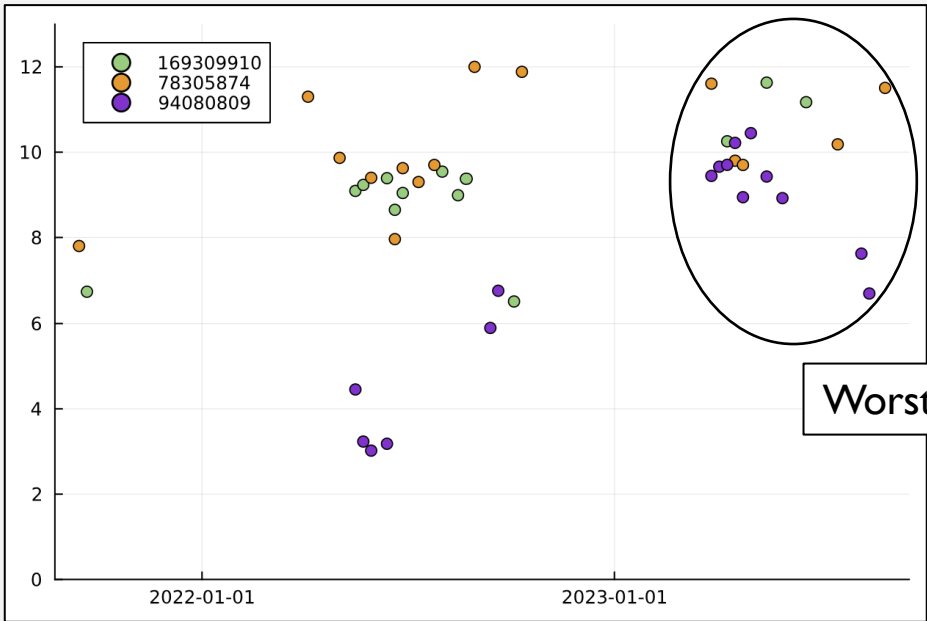
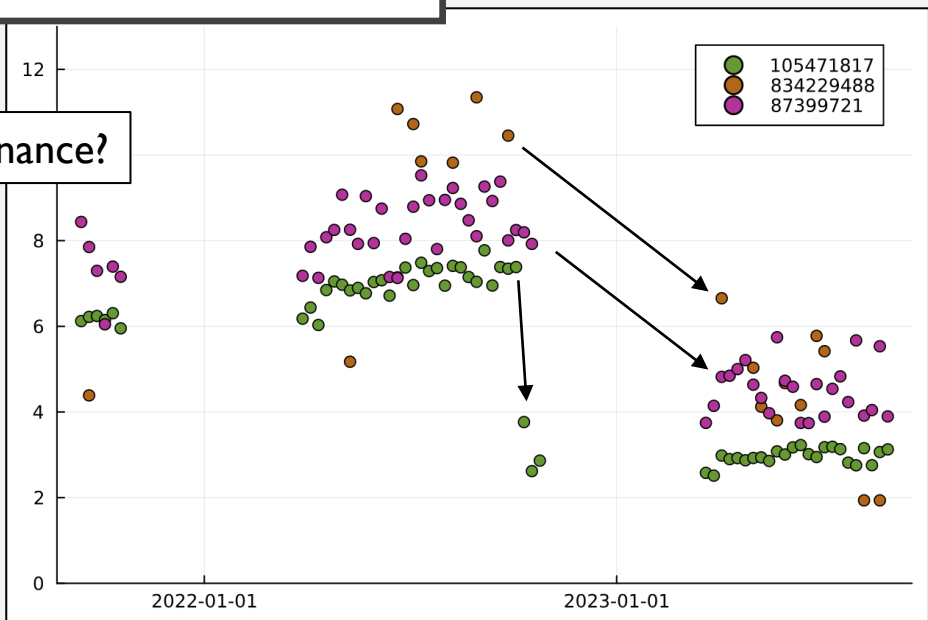
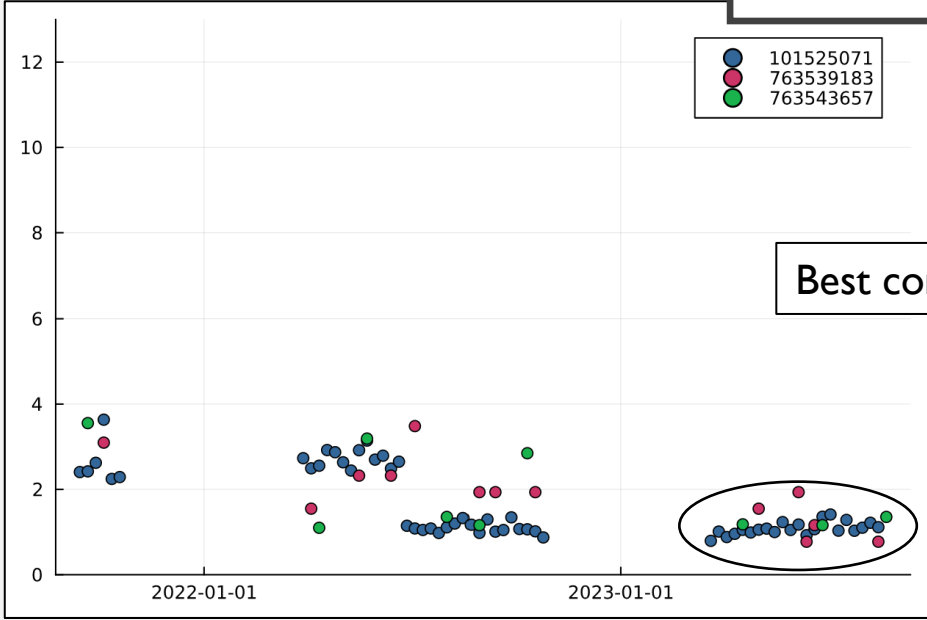


Total number of measurements varies between 1-3 and 2400 per year.

November-March are excluded due to winter conditions.

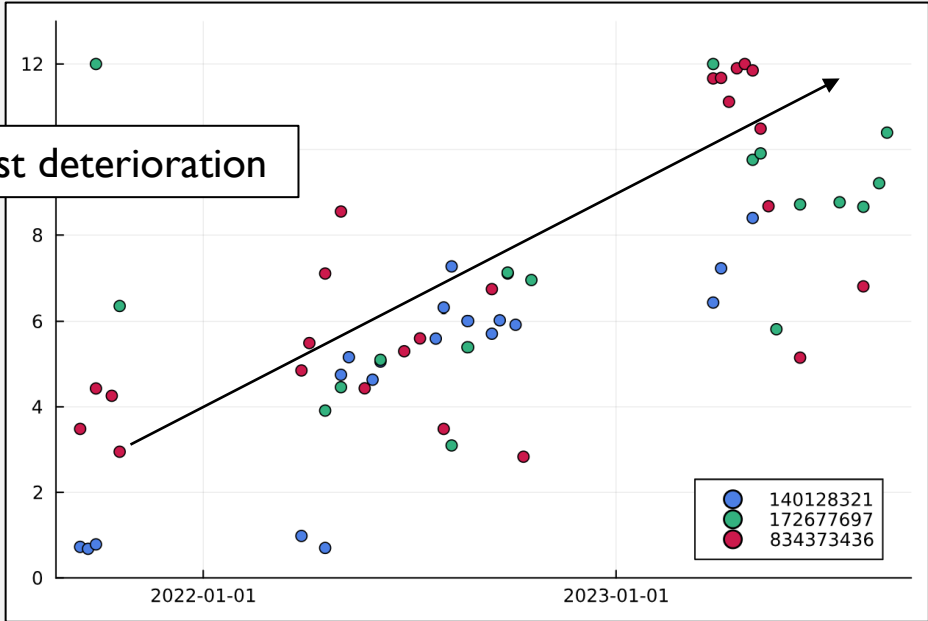
Date

PREDICT CONDITION



Absolute mean prediction error: 0.5 mm/m

Absolute max prediction error: 7.3 mm/m



CONDITION INDEX



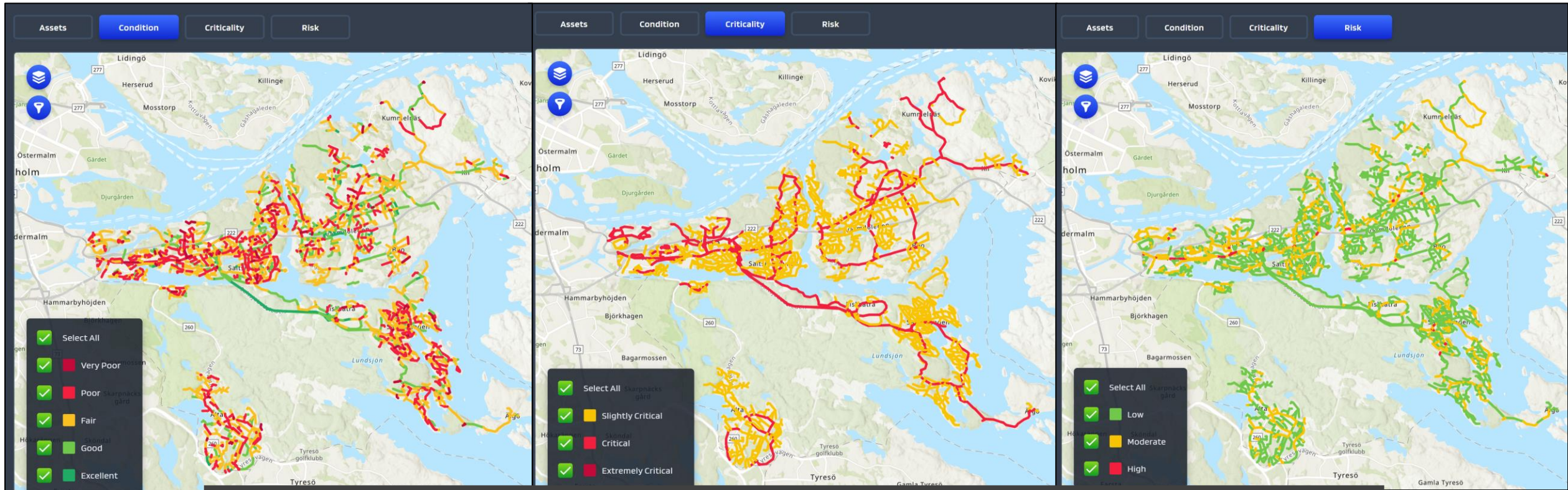
Condition

+

Criticality

=

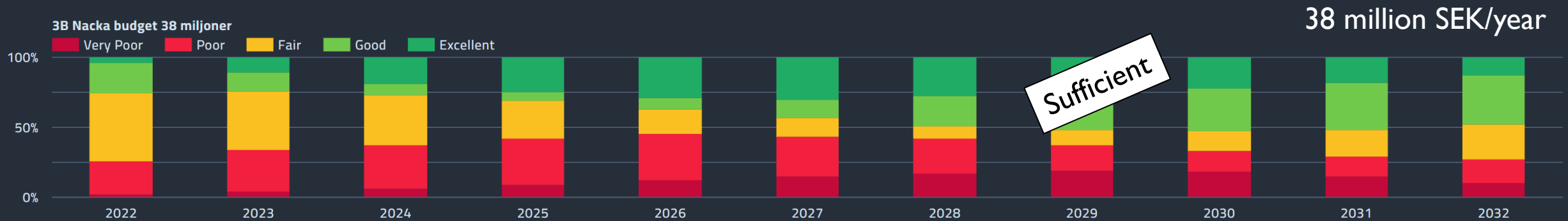
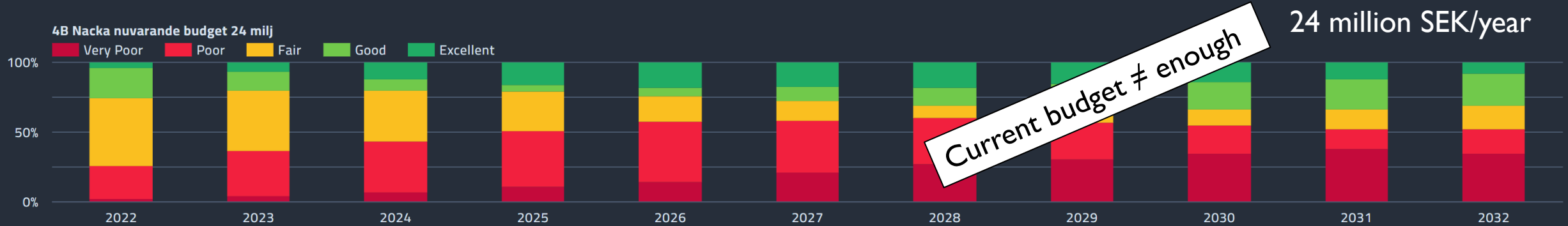
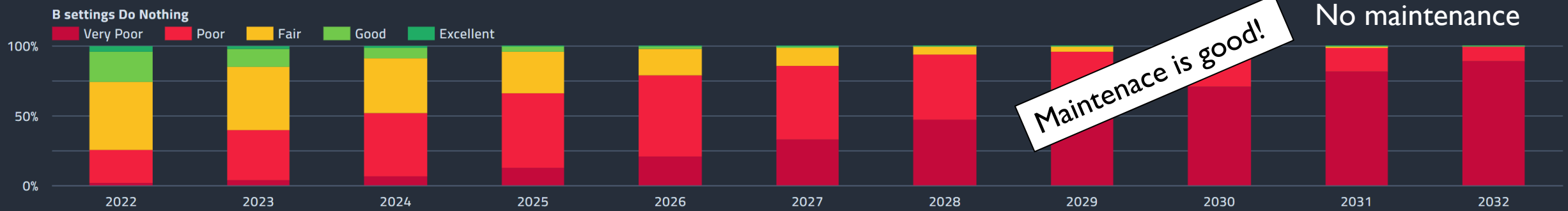
Risk



NACKA CURRENT STATUS

BUDGET OUTCOMES

Network Condition Distribution



NACKA CURRENT BUDGET

Select Scenario

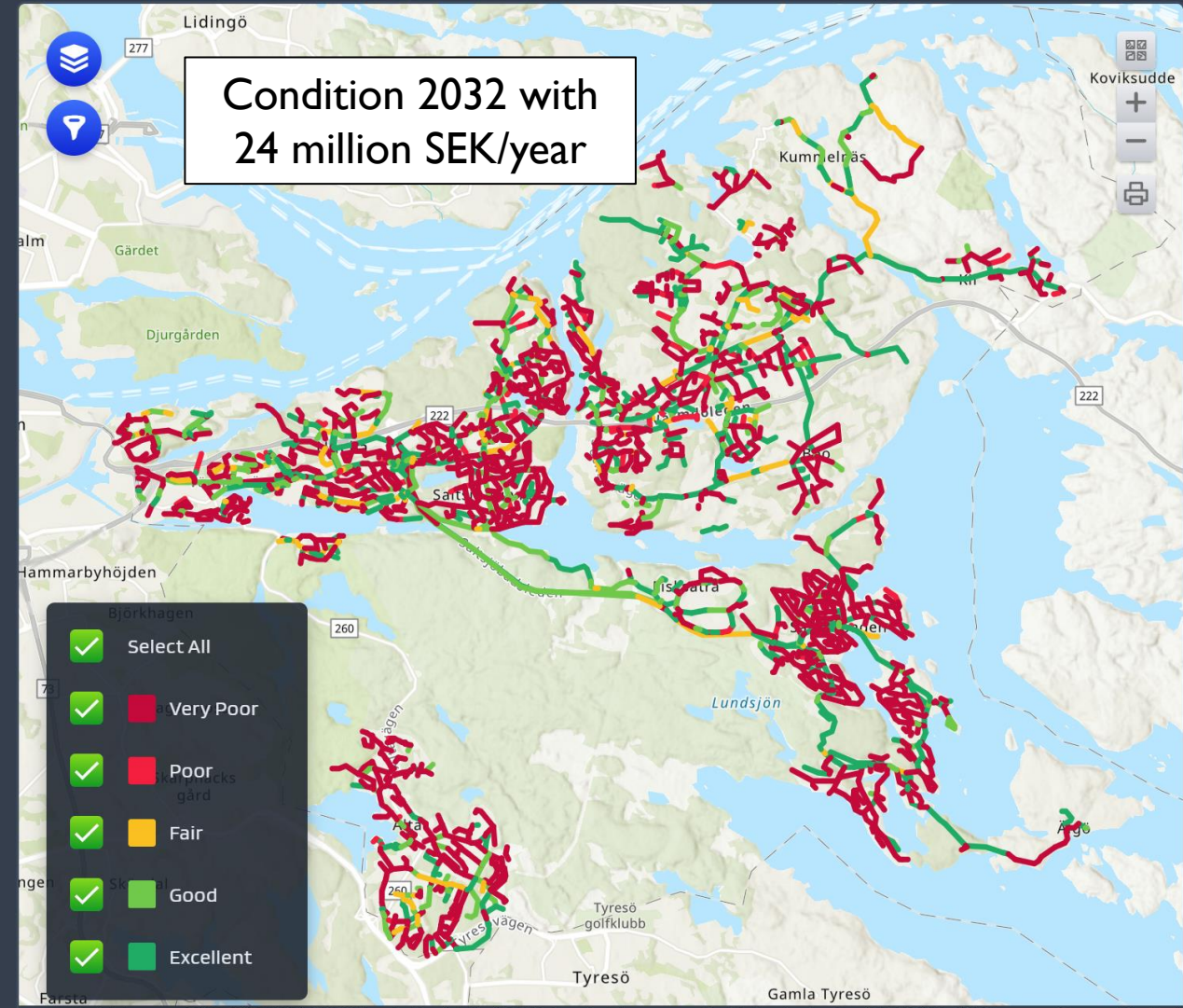
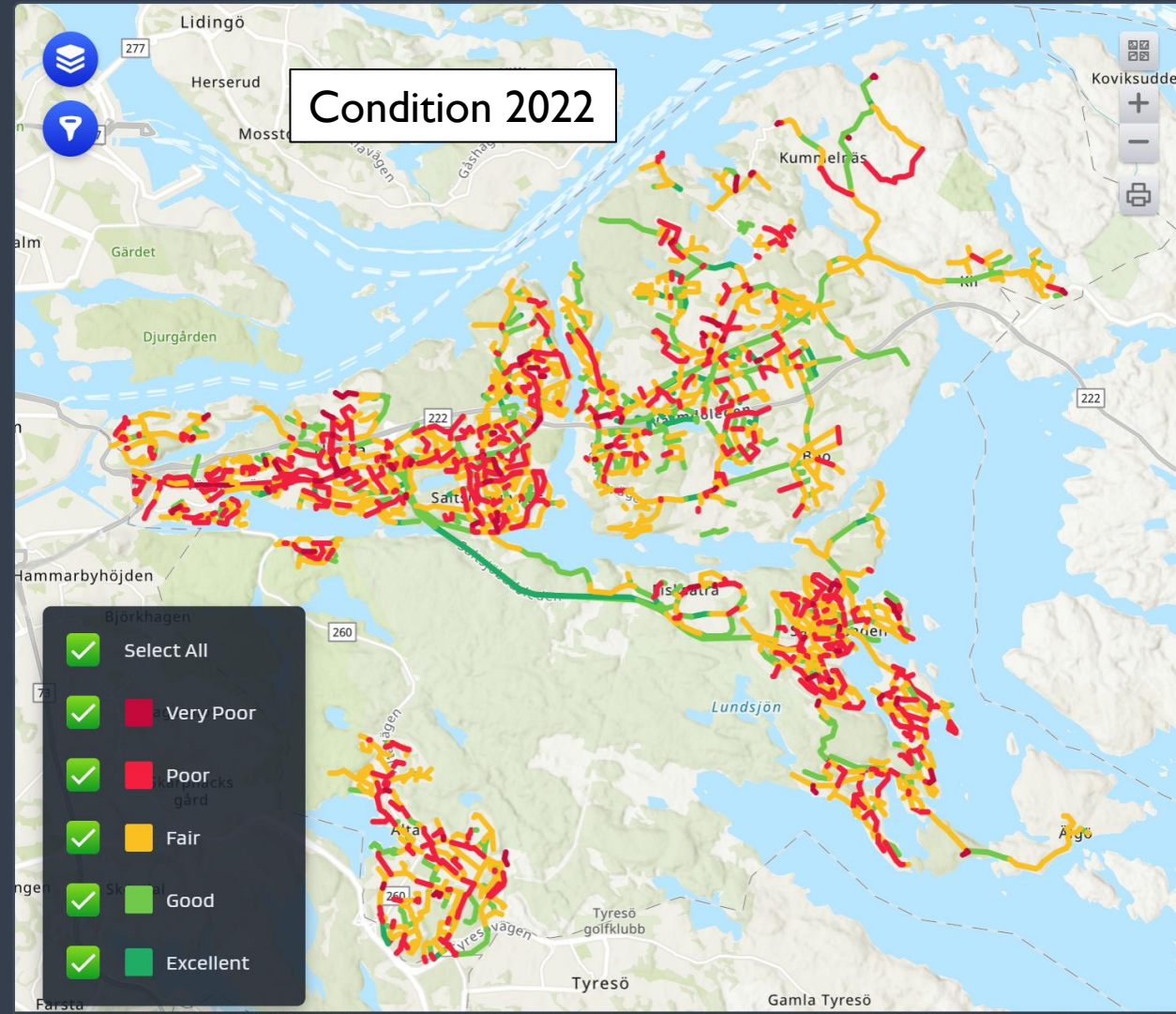
1B Nacka nuvarande budget

2022

Select Scenario

1B Nacka nuvarande budget

2032



NACKA SUFFICIENT BUDGET

Select Scenario 3B Nacka budget 38 miljoner

2022

Select Scenario 3B Nacka budget 38 miljoner

2032

Condition 2022

Condition 2032 with
38 million/year

- Select All
- Very Poor
- Poor
- Fair
- Good
- Excellent

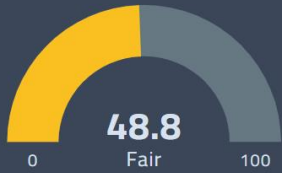
- Select All
- Very Poor
- Poor
- Fair
- Good
- Excellent

NACKA MAINTENANCE PLAN

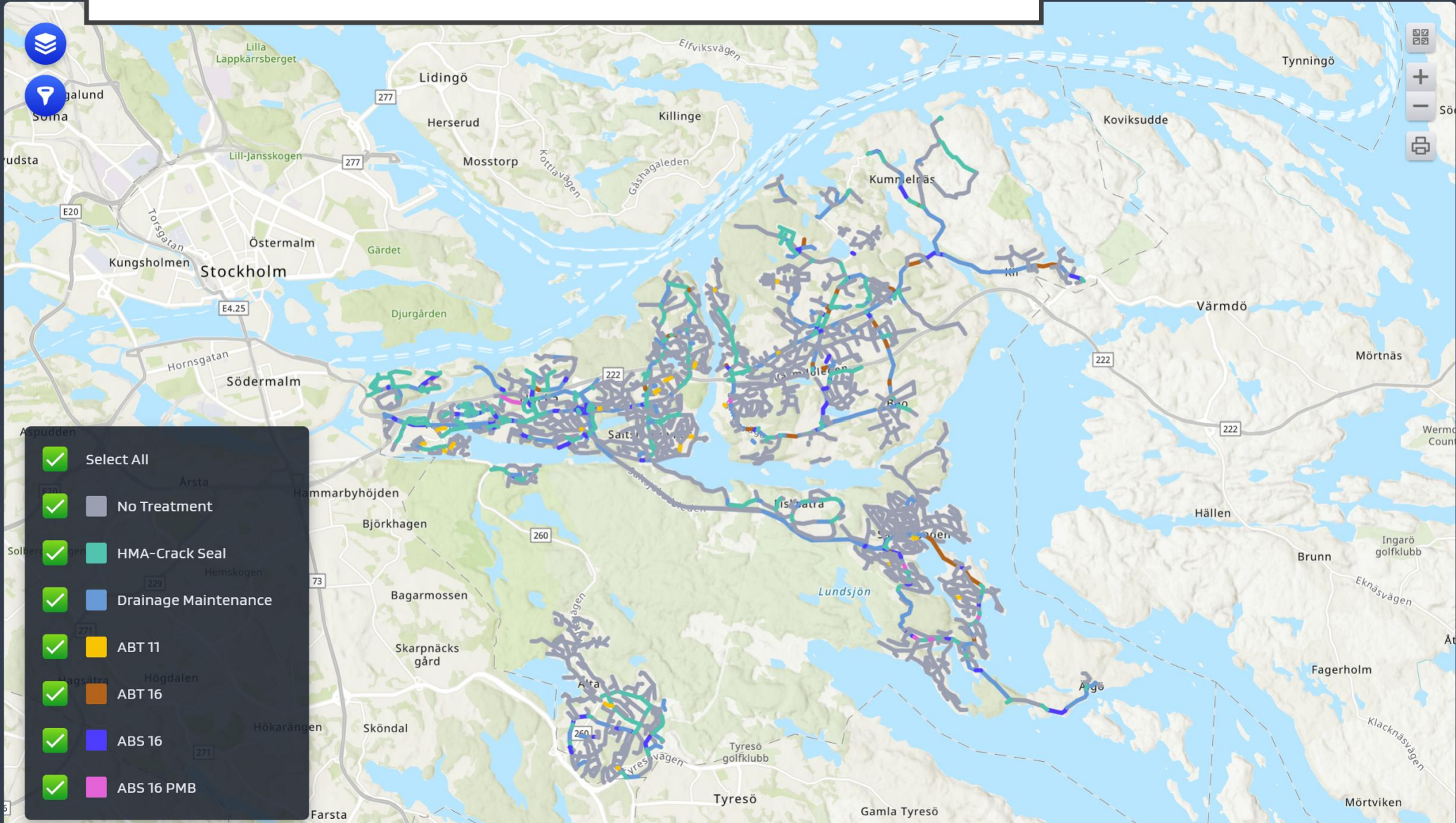
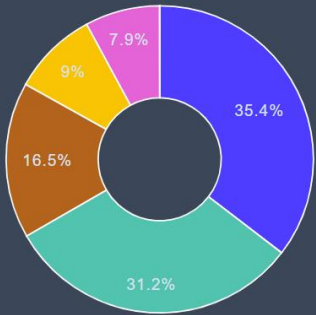
2023

Total Annual Expenditure
31 976 246 SEK

Network Condition



Budget Allocation



Thank you!



ERPUG