

MCA: Improving Oslo's cycling infrastructure

Per Halvorsen

pmhalvor@uio.no

GEO4460

Improving Oslo's cycling infrastructure

- Client: Oslo Kommune's Street, Transport, & Parking Dep.
- Criteria:
 - Popular public segments
 - Sources: [Strava API - Explorer Segment](#)
 - High traffic per timeframes (automotive/cyclists)
 - Sources: [Statens vegvesen trafikkdata](#)
 - High speeds (distance/time)
 - Sources: [Strava API - Detailed Segment](#)

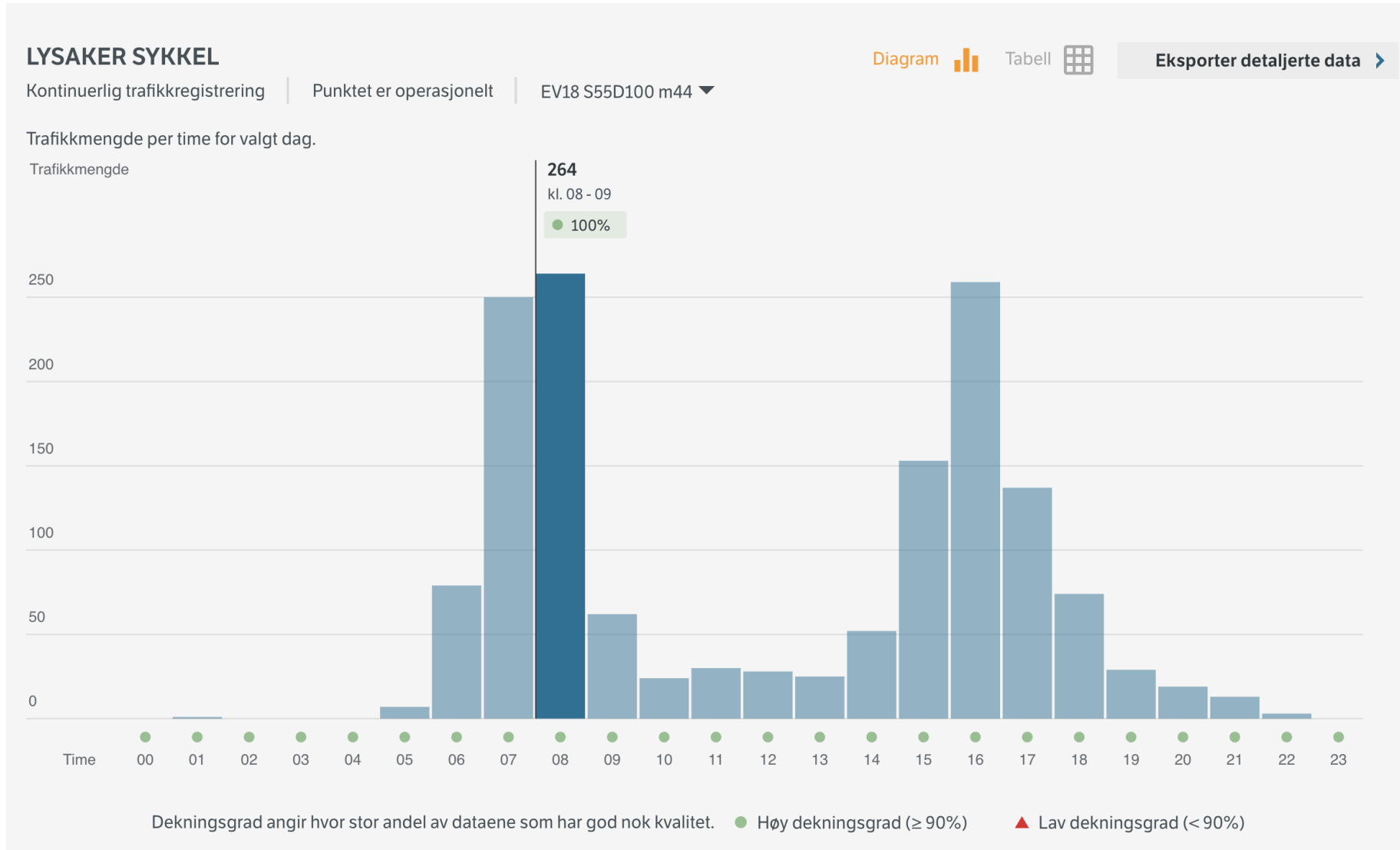
Strava segment details

```
{
  "id": 18999118,
  "name": "Kriminell i kollektivfeltet",
  "activity_type": "Ride",
  "distance": 1725.8,
  "average_grade": -0.6,
  "maximum_grade": 10.0,
  "elevation_high": 20.6,
  "elevation_low": 2.2,
  "start_latlng": [59.888826, 10.764719],
  "end_latlng": [59.874959, 10.77792],
  "climb_category": 0,
  "total_elevation_gain": 12.2,
  "map": {"polyline": "c`pJmnu`AzBwBd@i@bAeB~@uArCmD`ByAbAs@lCsAr@g@zBgBfAgAxAeBrRwW~@iAhBiBbBkAl@YIA_@|C{@`AYNI`BgAvCeCfAiAdB{A", ... },
  "effort_count": 294517,
  "athlete_count": 18327,
  "star_count": 32,
  "xoms": {"kom": "2:03", ... },
  "local_legend": {"effort counts": {"overall": "47 efforts", "female": "17 efforts"}, ... }
  ...
}
```

Defining popularity:

- Effort count / athlete count
- Effort count / (today – created at)
- Star count
- Stars count / athlete count

Traffic registration point data



Scope the data

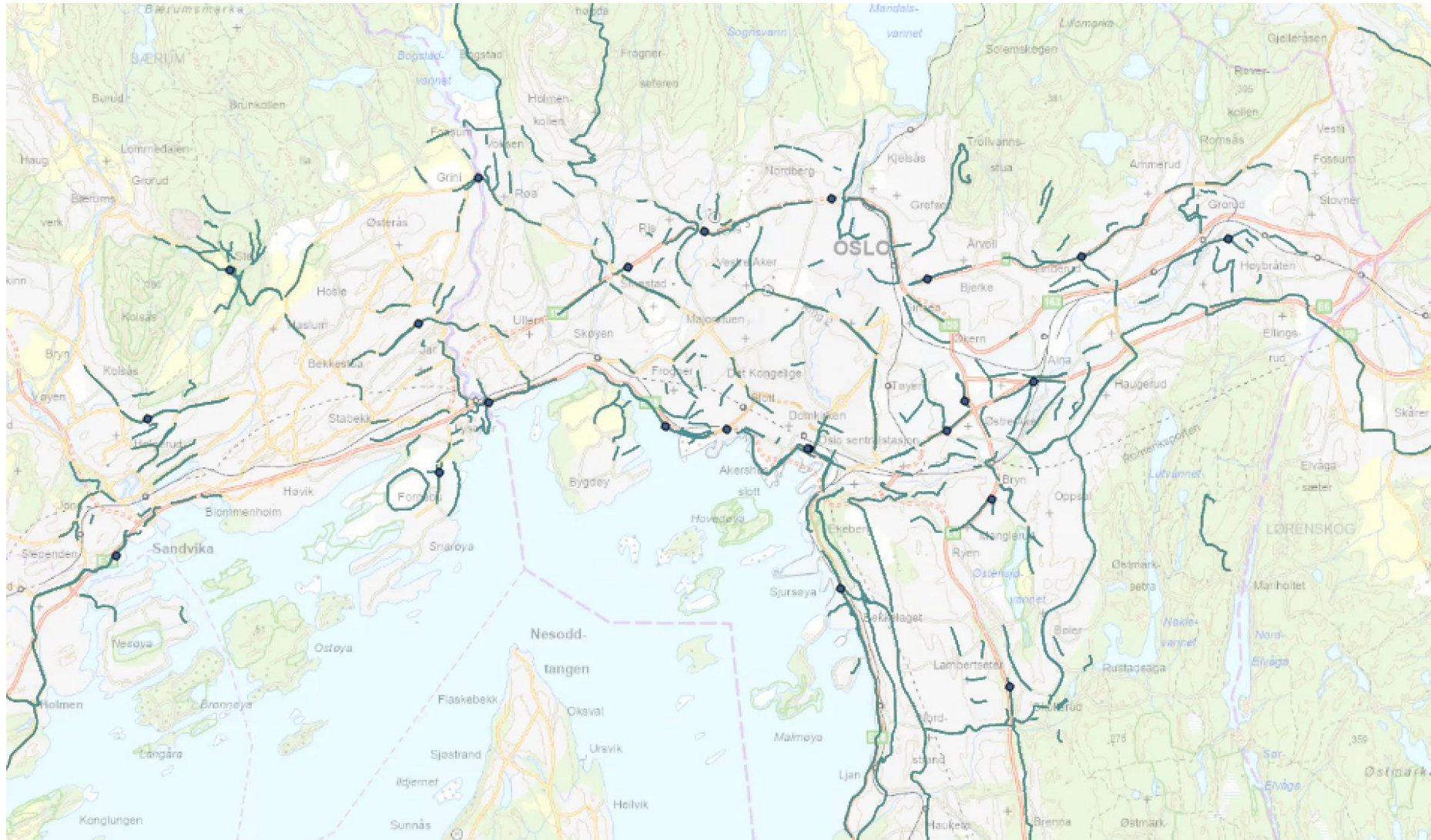
Vehicle types:

- Only bike
- Bikes & nearby cars

Interval:

- Hourly (over 1 month)
- Daily (over 1 year)

Current map



More data: [Bike paths on Google](#)