

POLIS

CITIES AND REGIONS FOR TRANSPORT INNOVATION

ANNUAL
CONFERENCE
2024

27-28 NOVEMBER 2024

KARLSRUHE (DE)



Baden-Württemberg
Ministry of Transport



Karlsruhe



Digitising Urban Freight

An example from Rotterdam

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**City of
Rotterdam**





What we worry about

1. URBAN METABOLISM

The urban economy may suffer if goods and services cannot reach their destination (or that waste cannot leave its origin) in time. This goes both for B2B and B2C deliveries

2. URBAN GROWTH

We face an urgent need to construct housing and we want dwellings in the city centre. This will generate substantial construction logistics during the building phase . And afterwards, it will lead to a permanent increase of the intensity of city logistics.

3. URBAN ENVIRONMENT

The urban environment may no longer be able or willing to carry the traffic burden



What we had available to start with

- A traffic model (simulation tool) at regional level, covering all modes, but not all in equal detail
- One step ahead was made in EU-project HARMONY, where we developed a model (TFS) specifically for urban freight transport
- But still we suffer from lack of detail (we want to become **street wise**)



What we made available in project SLIM:

1) *Street Level Intensity Map*

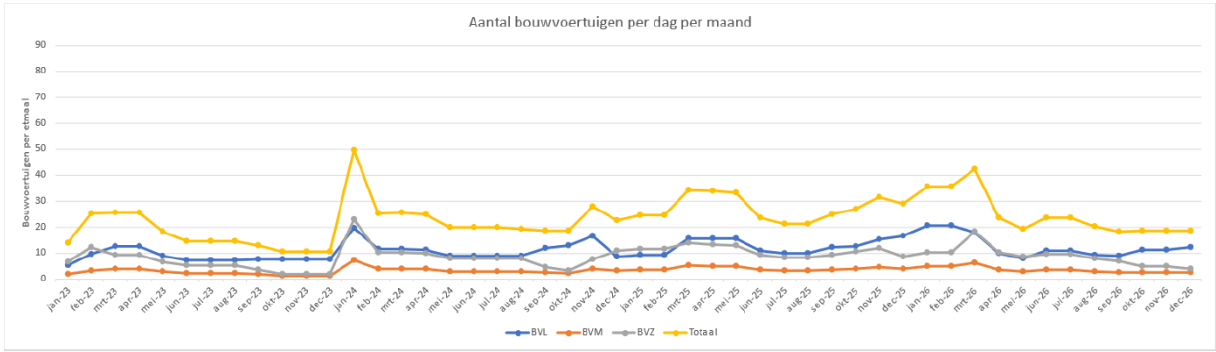
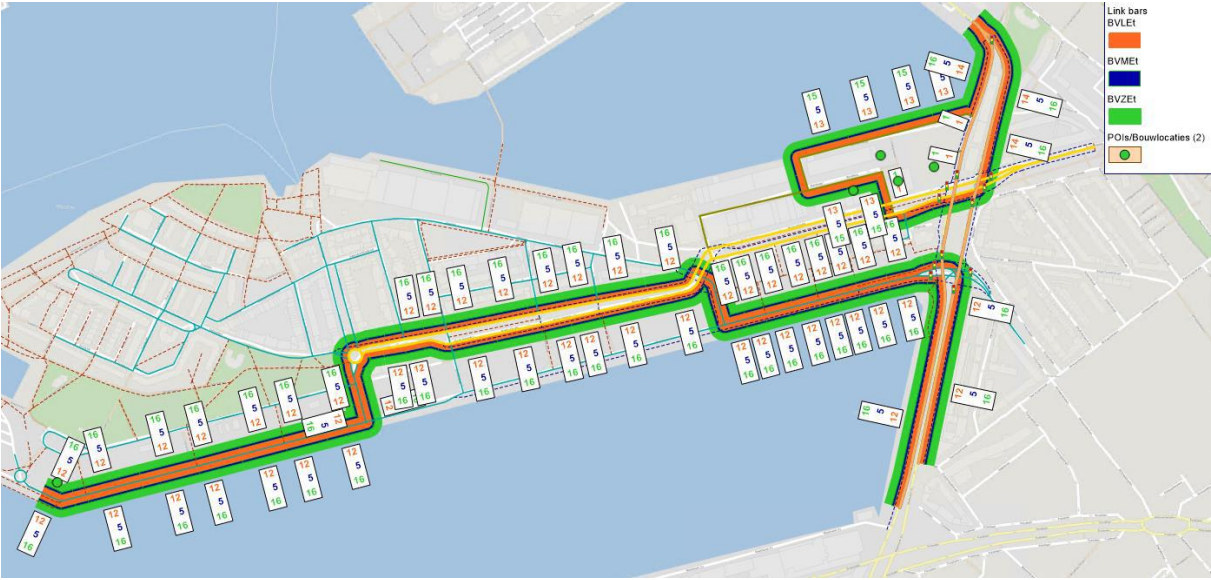
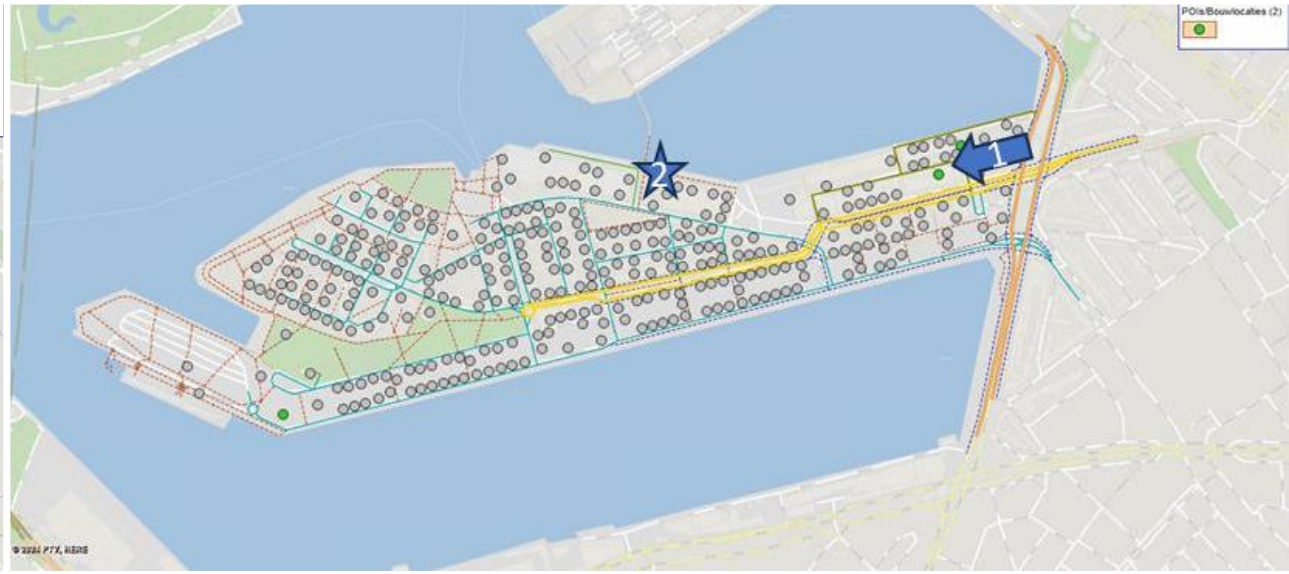
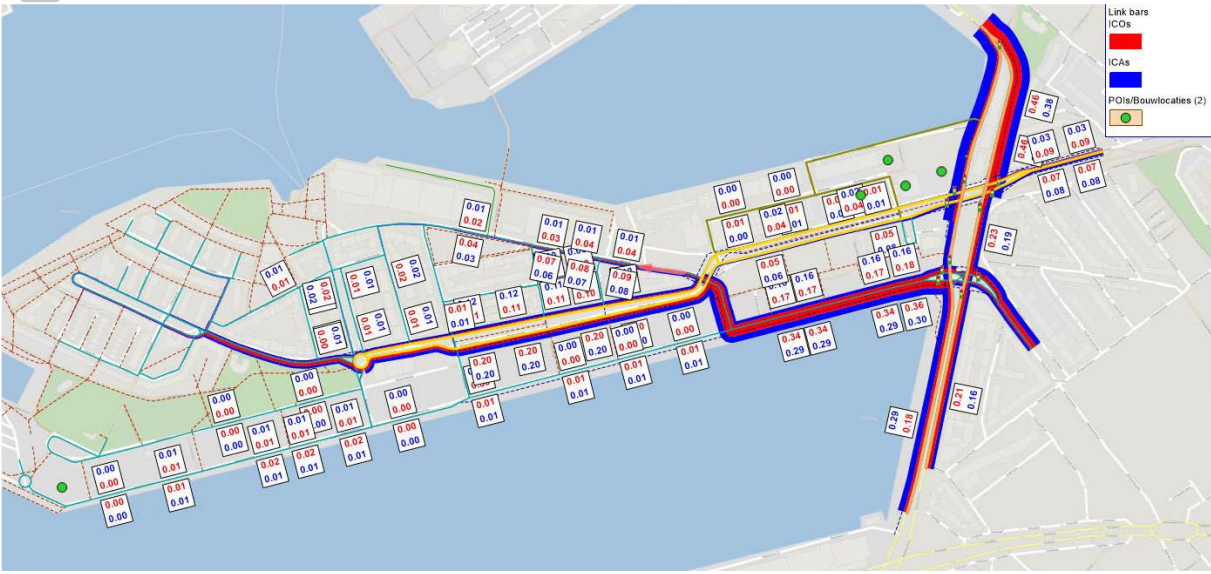
- Intelligent interpolation methodology, distributing traffic entering model zones (segments) over the streets within the segment
- Using publicly available sources on number of households in buildings, type and size of economic activity (*origin and destination* of trips)
- Logistic traffic per segment (Food&Fresh, Parcel, Retail, Waste, Construction, Facility&Service), distinguishing vans and lorries (*and working on extension with cargo bikes in EU project GLEAM-NSR*)



What we made available in project SLIM

2) *Construction Traffic Prognosis*

- Using general knowledge from research by TNO and Topsector Logistiek: amount of materials required per unit of building (m²)
- Including the phasing of the construction proces and the dominant type of freight vehicle used
- Situation specific information from builders (a.o. prefab or not)





How do we intend to use this?

- The intensity map provides the “background” value for traffic intensity in a street
- When simultaneous projects start attracting construction related traffic, this prognosis can be added to the background value
- In issuing building permits, the city requires the builders to keep their planning up to date, thus providing a cumulative traffic intensity
- When this cumulative intensity surpasses the maximum allowable value, (joint) action has to be taken to shave the peaks



What else is required beside these instruments?

- The awareness of project developers and their contractors that they may hinder each other and hinder the urban environment around the building locations
- The awareness within the city government that the concurrence of adjacent building projects leads to interference. This calls for building permits which take this interference into account.
- A covenant (not legally binding, but morally obliging) to be signed by all parties involved at the earliest possible stage.



Environmental permit



environmental permit request procedure



Demolition and construction safety plan

Draft BLVC Plan

Building site permit



building site permit request procedure



Final BLVC plan



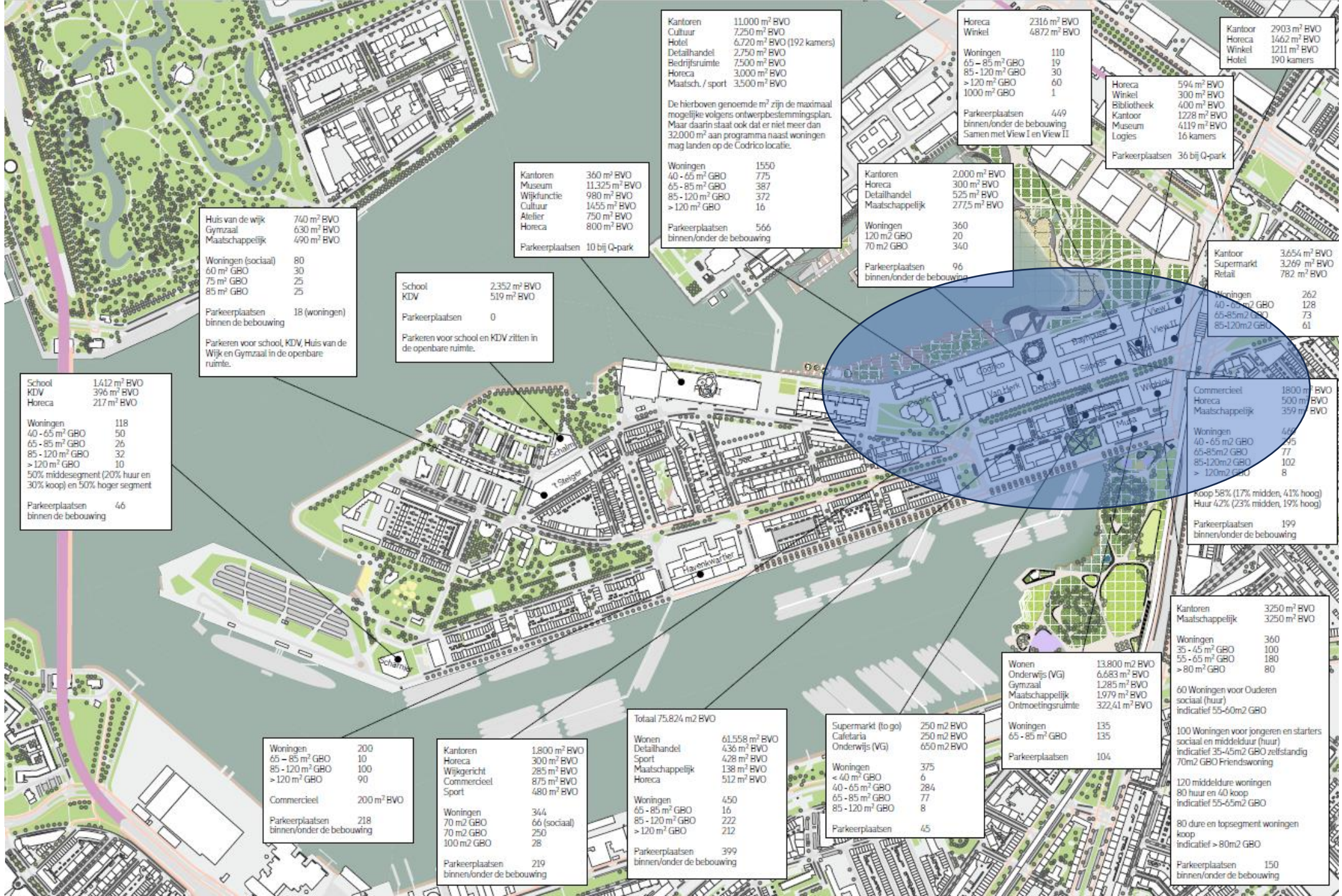




Where do we (intend to) use this?

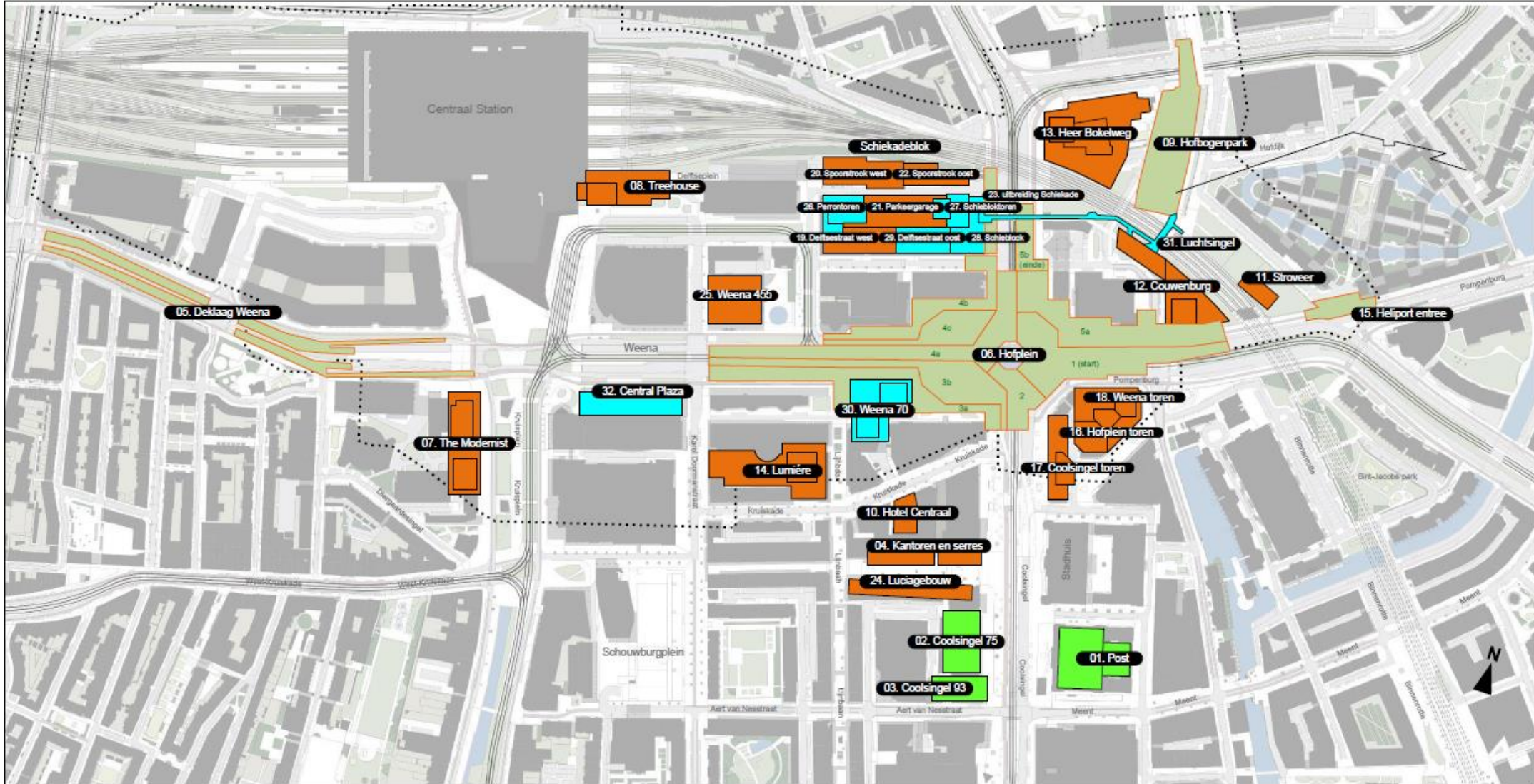
- The Katendrecht case, as discussed
- The case of Rotterdam Central District, another cluster of overlapping and adjacent building initiatives
- Complicated by reconstruction of the nearby Hofplein roundabout, a 3-year infrastructural maintenance project restricting accessibility
- We hope to be back in one of the next Polis Conferences to update you on the outcome







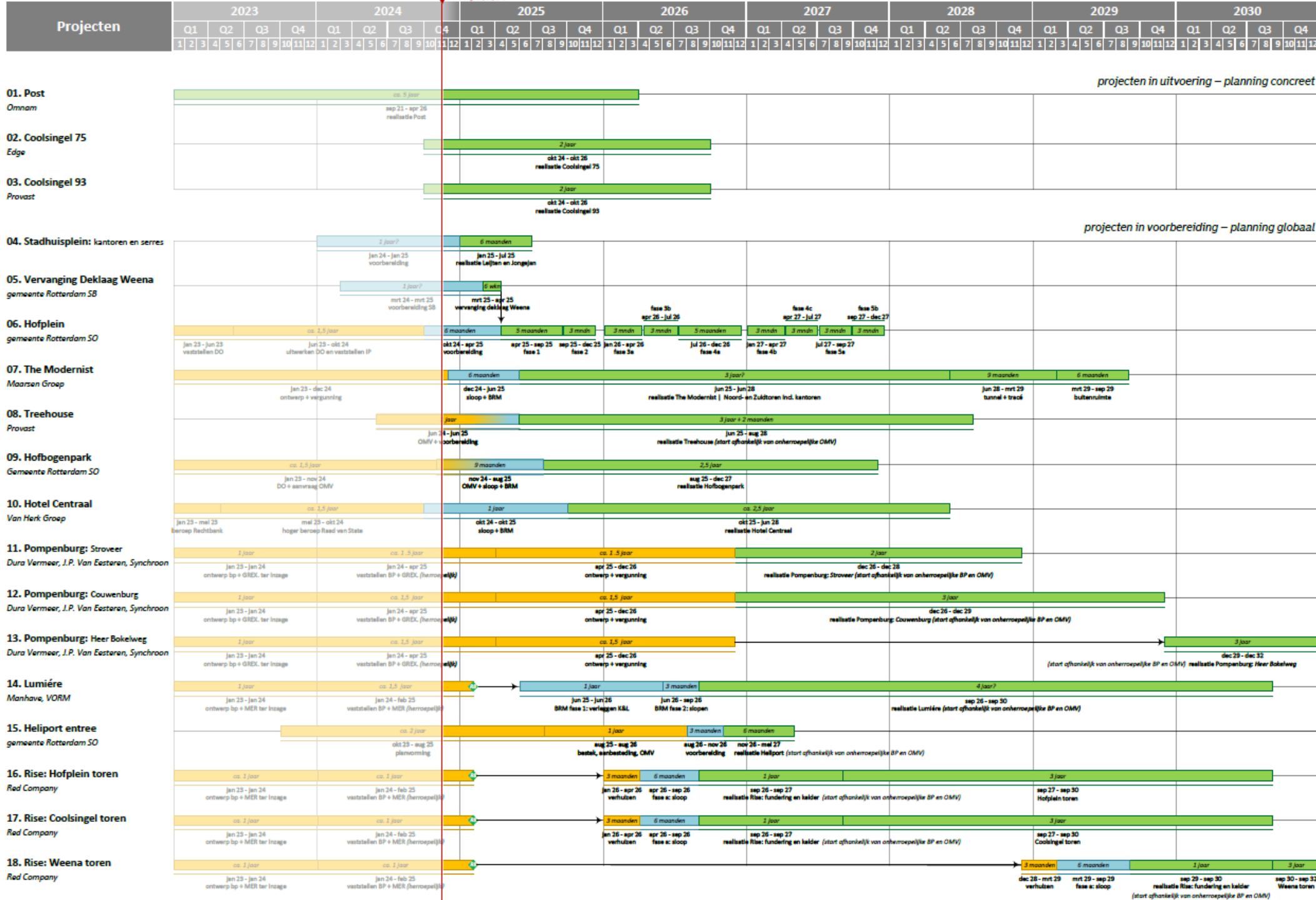




Projecten in uitvoering	(planning concreet)
01. Post	sep. '21 – apr. '26
02. Coolsingel 75	okt. '24 – okt. '26
03. Coolsingel 93	okt. '24 – okt. '26

Projecten in voorbereiding	(planning globaal)		(planning globaal)
04. Stadhuisplein: kantoren en serres	Q1. '25 – Q3. '25	15. Heliport entree	Q4. '26 – Q2. '27
05. Vervanging Deklaag Weena	Q1. '25 – Q2. '25	16. Rise: Hofplein toren	Q3. '26 – Q3. '30
06. Hofplein	Q2. '25 – Q4. '27	17. Rise: Coolsingel toren	Q3. '26 – Q3. '30
07. The Modernist	Q2. '25 – Q2. '28	18. Rise: Weena toren	Q3. '29 – Q3. '32
08. Treehouse	Q2. '25 – Q3. '28	19. Schiekadeblok: Delftsestraat-West	Q4. '25 – Q2. '27
09. Hofbogenpark	Q3. '25 – Q4. '27	20. Schiekadeblok: Spoorstrook-West	Q2. '26 – Q4. '28
10. Hotel Centraal	Q4. '25 – Q2. '28	21. Schiekadeblok: Parkeergarage	Q2. '27 – Q4. '28
11. Pompenburg: Stroveer	Q4. '26 – Q4. '28	22. Schiekadeblok: Spoorstrook-Oost	n.t.b.
12. Pompenburg: Couwenburg	Q4. '26 – Q4. '29	23. Uitbreiding Schiekade (tijdelijk IP)	Q1. '27 – Q2. '27
13. Pompenburg: Heer Bokelweg	Q4. '29 – Q4. '32	24. Stadhuisplein: Luciagebouw	Q3. '26 – Q1. '27
14. Lumière	Q3. '26 – Q3. '30	25. Weena 455	n.t.b.

Projecten in verkenning	(planning aanname)
26. Schiekadeblok: Perrontoren	n.t.b.
27. Schiekadeblok: Schiebloktoren	n.t.b.
28. Schiekadeblok: Schieblock	n.t.b.
29. Schiekadeblok: Delftsestraat-Oost	n.t.b.
30. Weena 70 / ASR	n.t.b.
31. Nieuwe Luchtsingel	n.t.b.
32. Central Plaza	n.t.b.



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**Thank you for
your attention!**



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