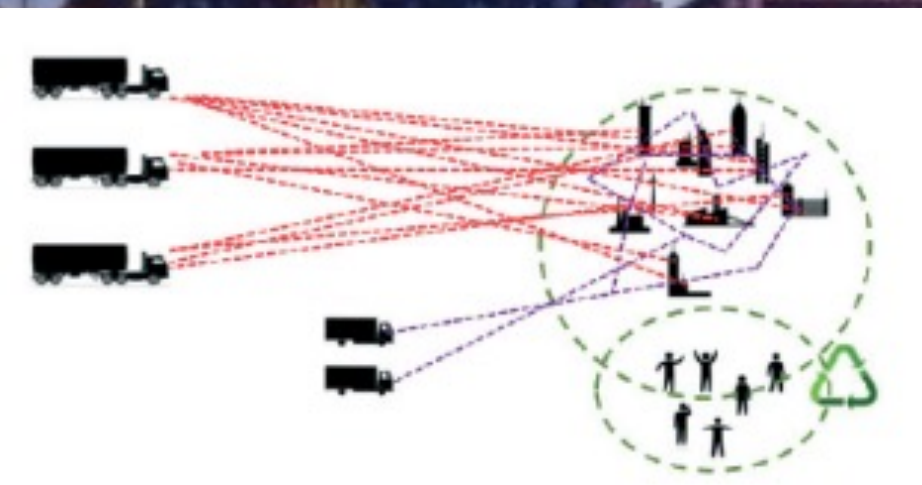




Transparent Transports

How might we **reduce the climate footprint** caused by **public consumption** causing **cargo transportation** in the city?

Helsingborgs Stad - Living Lab - Federated – Trafikverket – Lindholmen Science Park



The problem

Public procurement is not sustainable enough for the 2030 goals

- 3,4 billions of public shopping annually, but no one has a clue on how many transports that leads to.
- Lots of goals about city logistics in governing documents, & shiny deals- but none or little action!



The solution

- Offer / (demand of usage of) a platform for suppliers where transports are made visible and data can be shared between actors
- Let business opportunities & efficiency gains be taken by the ones with the most knowledge & greatest opportunity to adapt to changes
- More pooling and similar activities, with the help of shared data



The effect

- Better understanding of the logistics flow to and from municipal units
- Less emissions based on cargo transportation in the city
- Lower costs on transportation contracts
- Less heavy traffic around schools & elder homes

Project friends

Delivery companies & supplier stakeholders

- **Suppliers:** Ahlsell, Skånemejerier, Läromedia, Bondens Skafferi, Office Depot, Adlibris, Grönsakshallen, Felestad, Flügger, Stures Bageri, Lekolär, Perfect Print, Procurator
- **Delivery:** Skånemejerier, Grönsakshallen, Tonys Budbilar & Menigo

Municipal Departments

473 (1500) colleagues doing procurements! Stadsledningsförvaltningen, Skol- och Fritidsförvaltningen, Vård- och omsorgsförvaltningen

LL development team

Linda Bermin – City traffic planner | **Petter Andersson** – IT solutions architect | **Maria Sjödin** – UX Design
Johan Berglind – Lead developer VNTRS AB - **Tommy Boije** – innovation lead | **Vincent Andersson** – Data specialist
Camilla Alfredsson – procurement manager |

Trafikverket, FEDeRATED, Lindholmen Science Park



Status

Now

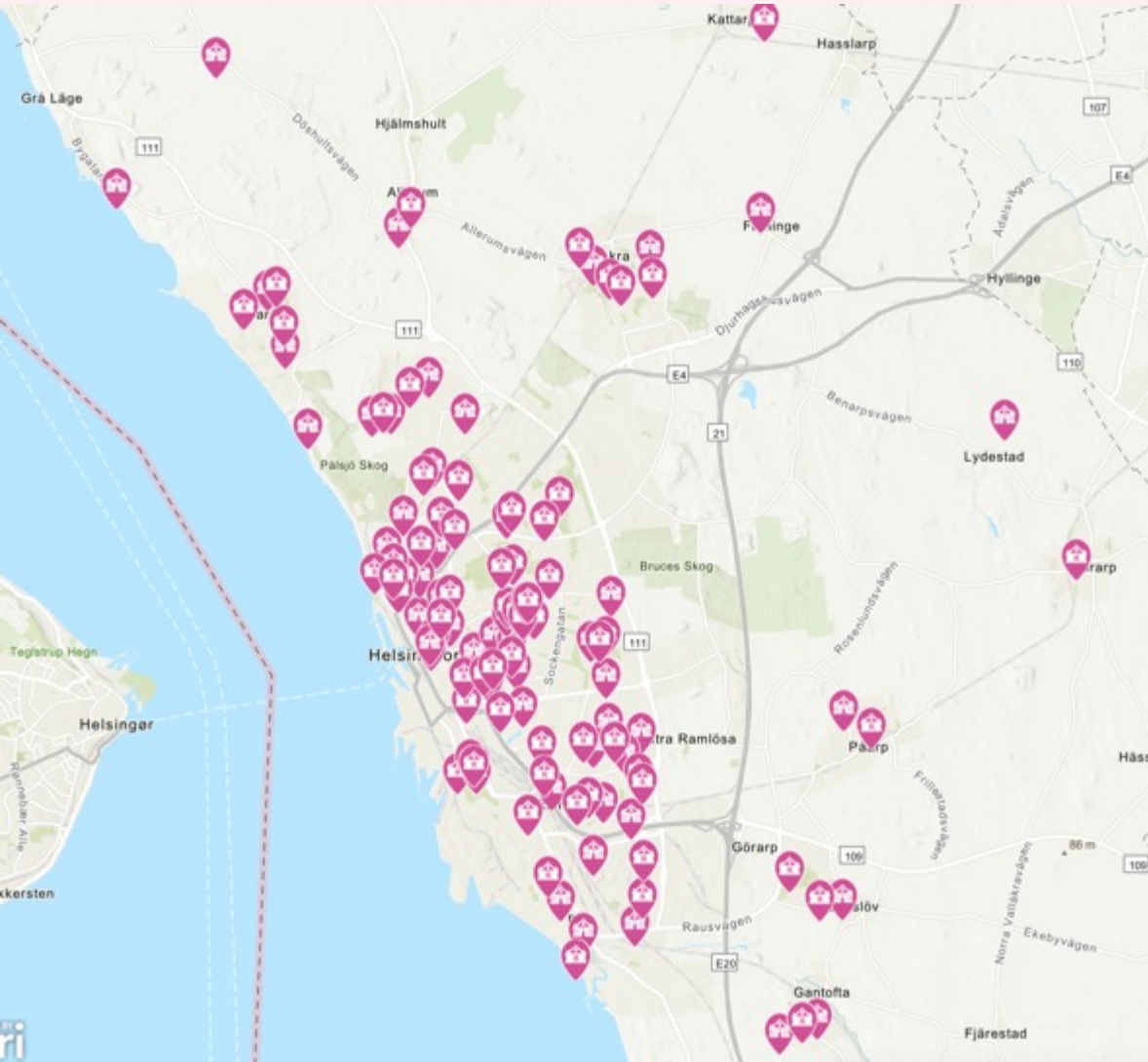
- Phase 4 of the ongoing Living Lab, learnings and continuous cooperation with stakeholders.
- Development of an open data platform for visualizing deliveries, iteration 1
- Testing together with carriers + suppliers, defining functionalities for iteration 2
- Preparation and scope for iteration 2, develop phase June-August
- System innovation approach on the public consumption chain, aiming for reducing the 150kt by 2030, using a demand acceleration process ("procurement of what isn't")

Next

- Testing the solution with carriers, gathering data from a few, then more
- Integrations with supplier & fleet data, possibly digital twin
- Iterating on functionalities
- Scaling to all suppliers, might be as a "should use-demand" in procurement deals
- Scaling to surrounding cities in the region



Conclusions of round 3

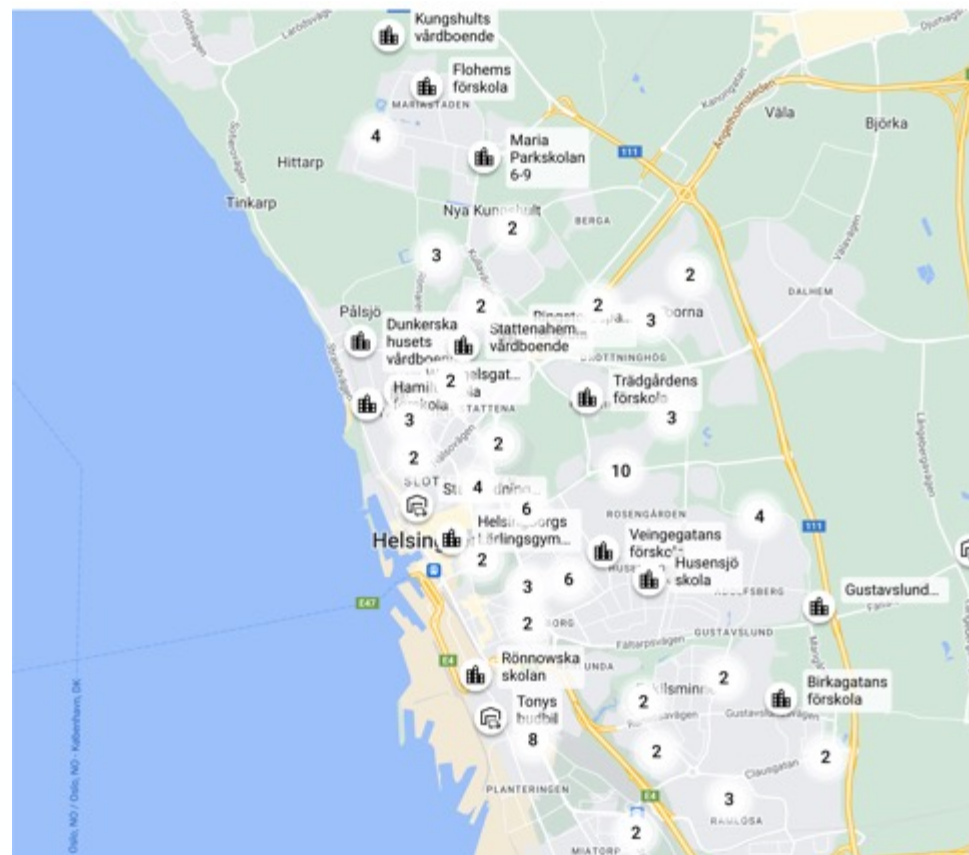


Benefits concluded

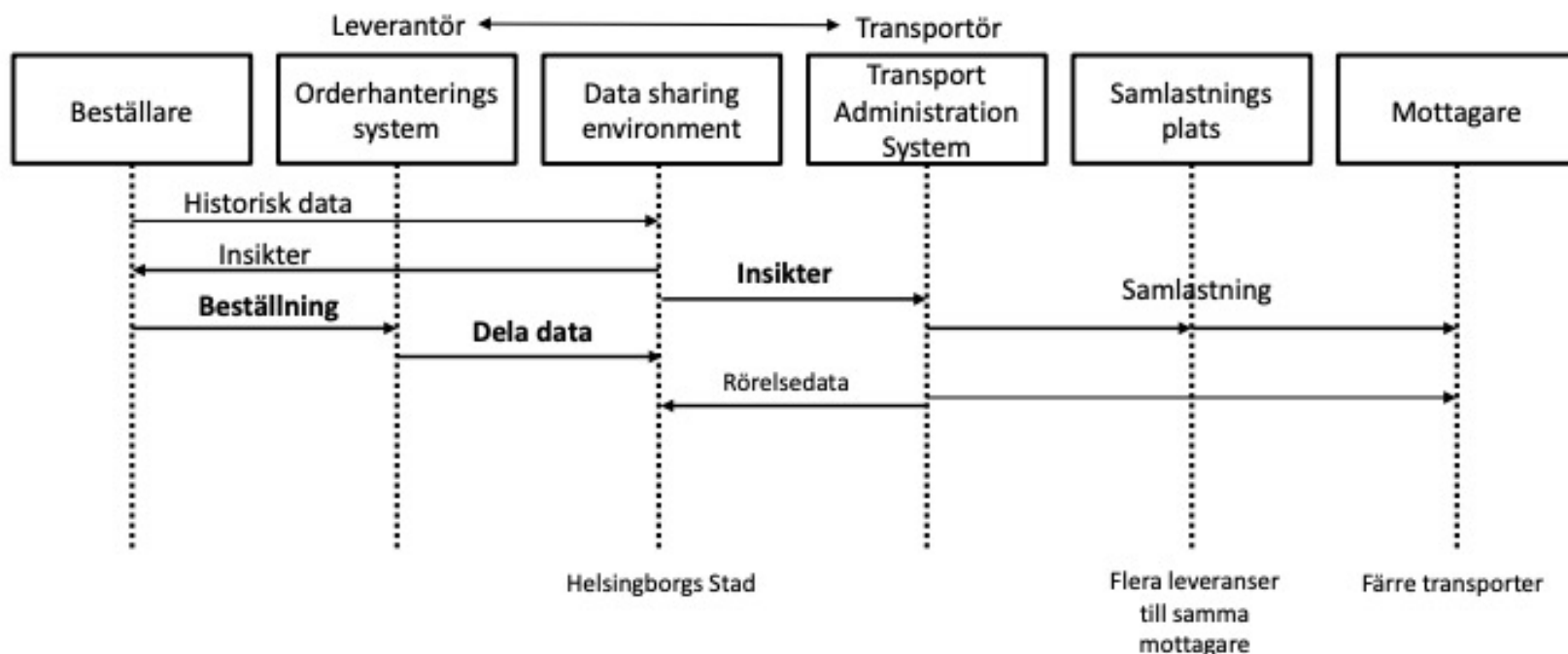
1. **It works!** Pooling is taking place between 3 actors - Skånemejerier, Tonys Budbilar & Grönsakshallen is sharing/pooling last mile transport.
2. **Costs has been lowered** by 18% on the Skånemejerier contract
3. **Pooling initiatives** based on one school and 3 carriers in the test means **less emissions** in the city. We have 100+ schools/preschools and some 20 elder care homes

Benefits in scope of round 4

1. Visualisations of transports to municipal locations leads to even more pooling, 10 initiatives as a goal for the first round
2. Better knowledge of the transportation system based on the data gathered, focusing on analysing ordering behaviours
3. Time saved among staff from handling deliveries, 400tkr a year in the long run
4. Connecting to more data sources, order data & fleet data. This still remains in research mode



Public consumption - sequence



Beställning

Artikelnummer
Antal
Vikt
Referens (många gånger saknas referens vilket innebär ett merarbete)

Dela data

Sändnings-id /etikettnummer
Antal kolti
Volym
Vikt
Mottagare och adress
Miljökrav om drivmedel och/eller utsläpp
Transportkrav, t.ex. kyla.

Insikter

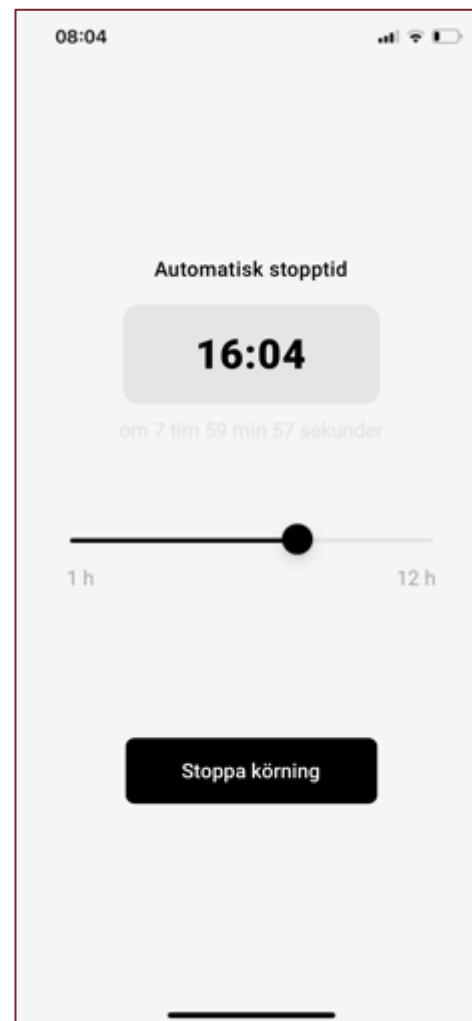
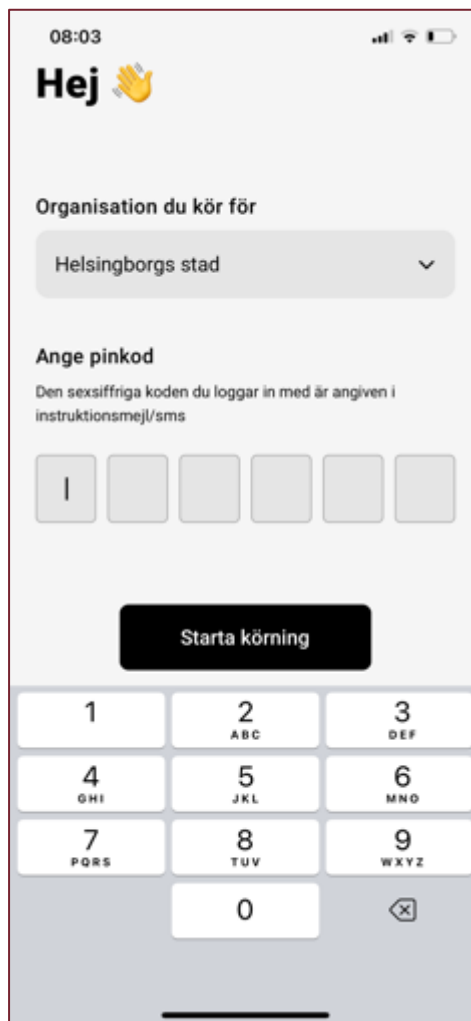
Delad data skapar möjligheter till samlastning och uppföljning. Gäller både staden och leverantörer/transportörer

Sam – a overview of municipal deliveries

- Web site with a generated list & map view of deliveries
- Web based app for geofenced delivery points – date/time, vehicle, carrier, contacts
- Start manually, stop automatically (or manually) – as few interactions as possible
- Generated data view as a list + map with possible interactions between carriers + suppliers



”Sam” – the carrier analysis app



”Samlist” – views



HELSINGBORG

Leveranser

Dag ▾ Plats ▾ Område ▾ Leverantör ▾ Transportör ▾ Rensa alla

Dag	Plats	Typ	Tid	Leverantör	Transportör	Område	Datum
Tis	Ångslyckans förskola Domaregatan 15	ff	20:37		Bilawal test org	Elineberg	2023-05-16
Tis	Elinebo vårdboende Domaregatan 14	ff	20:37		Bilawal test org	Elineberg	2023-05-16
Tis	Ångslyckans förskola Domaregatan 15	ff	20:37		Bilawal test org	Elineberg	2023-05-16
Tis	Elinebo vårdboende Domaregatan 14	ff	20:37		Bilawal test org	Elineberg	2023-05-16
Tis	Ångslyckans förskola Domaregatan 15	ff	20:37		Bilawal test org	Elineberg	2023-05-16
Tis	Elinebo vårdboende Domaregatan 14	ff	20:37		Bilawal test org	Elineberg	2023-05-16
Tis	Elinebo vårdboende Domaregatan 14	ff	19:33		Helsingborgs stad	Elineberg	2023-05-16
Tis	Ångslyckans förskola Domaregatan 15	ff	19:07		Helsingborgs stad	Elineberg	2023-05-16
Mån	Ångslyckans förskola Domaregatan 15	ff	13:59		Helsingborgs stad	Elineberg	2023-05-08
Mån	Ångslyckans förskola Domaregatan 15	ff	13:59		Helsingborgs stad	Elineberg	2023-05-08
Mån	Ångslyckans förskola Domaregatan 15	ff	13:59		Helsingborgs stad	Elineberg	2023-05-08
Mån	Ångslyckans förskola Domaregatan 15	ff	13:59		Helsingborgs stad	Elineberg	2023-05-08
Mån	Ångslyckans förskola Domaregatan 15	ff	13:59		Helsingborgs stad	Elineberg	2023-05-08
Mån	Ångslyckans förskola Domaregatan 15	ff	13:59		Helsingborgs stad	Elineberg	2023-05-08

Hur kan data visualiseras?

Leverantörerna ser risker med att synliggöra samtliga leveransställen, dvs adresspunkter/leveranser till privatpersoner eller till privata kunder. Vilka gator man kör på är inte känsligt att dela.

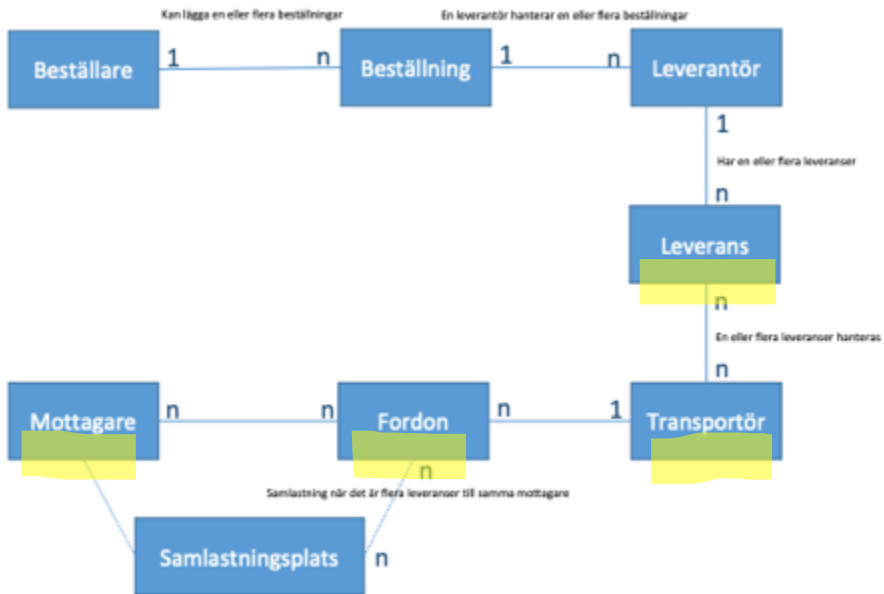
Leverantörerna önskade att följande data visualiseras:

- Adresspunkter/koordinater (avgång lager / angöring enhet) ✓
- Tider (avgång lager / angöring enhet) ✓
- Varutyp ✓
- Antal leveranser per enhet ✓
- Frekvens ✓
- Eventuellt mängd

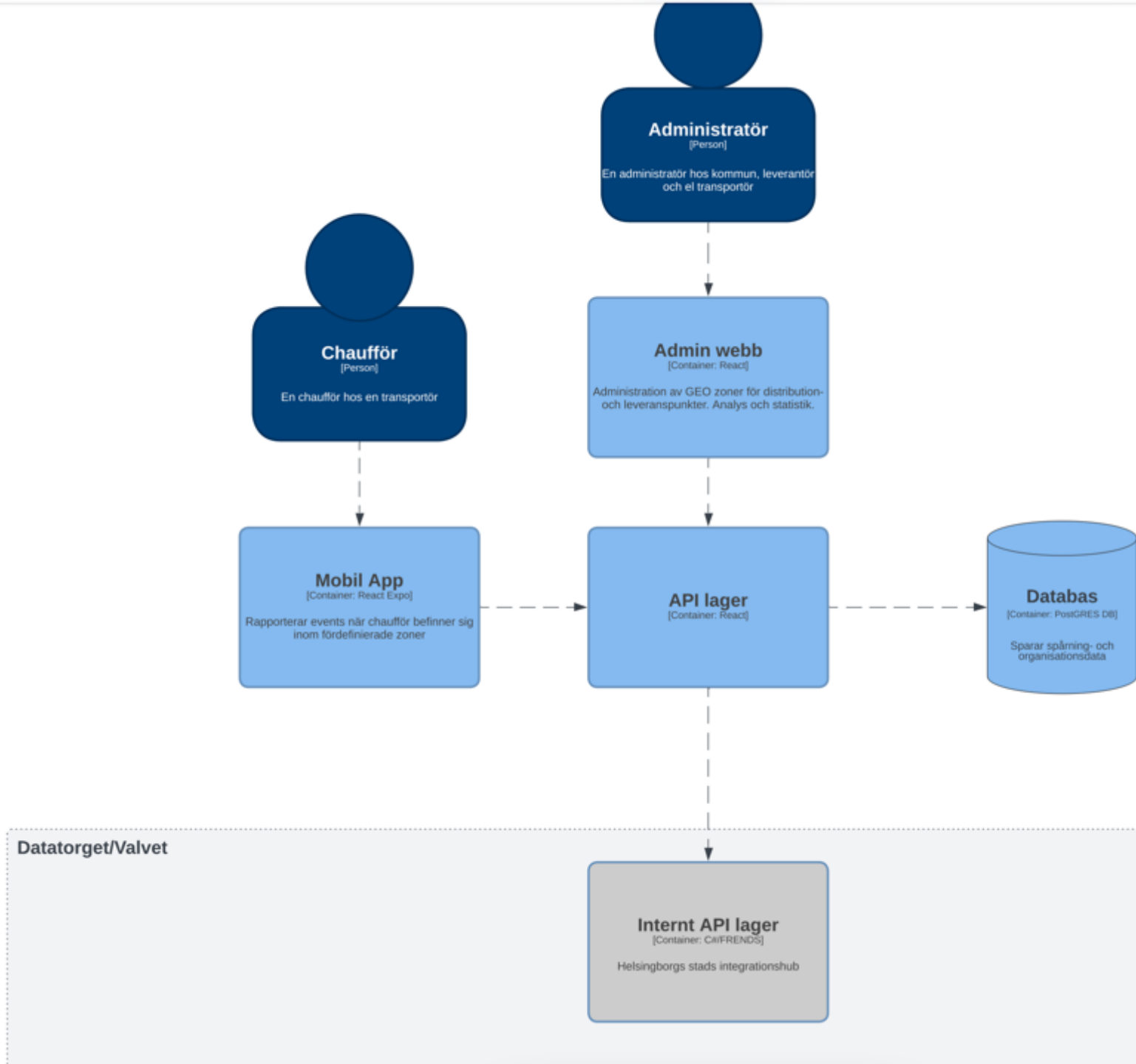
Vad börjar vi med, vad är möjligt för staden att ställa krav på?

Det enklaste är att börja med något som alla klarar av att leverera. I pilotstadiet fungerade sensorer bra. Mobiltelefoner kan också fungera som spårning istället för sensorer.

Sam & Samlist – system overview



Semantic model + scope for round 1



Datatorget/Valvet