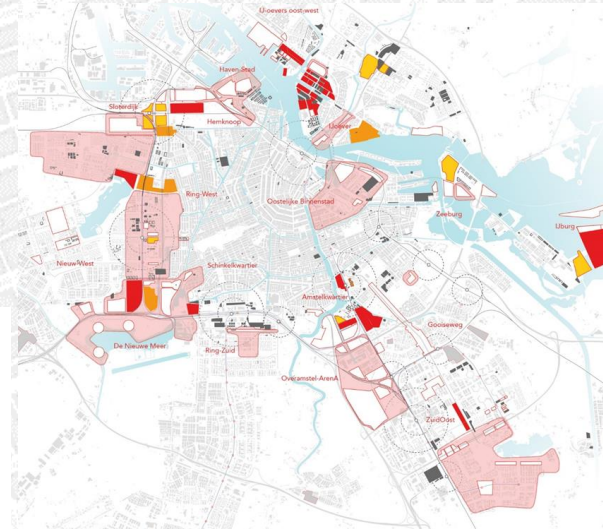
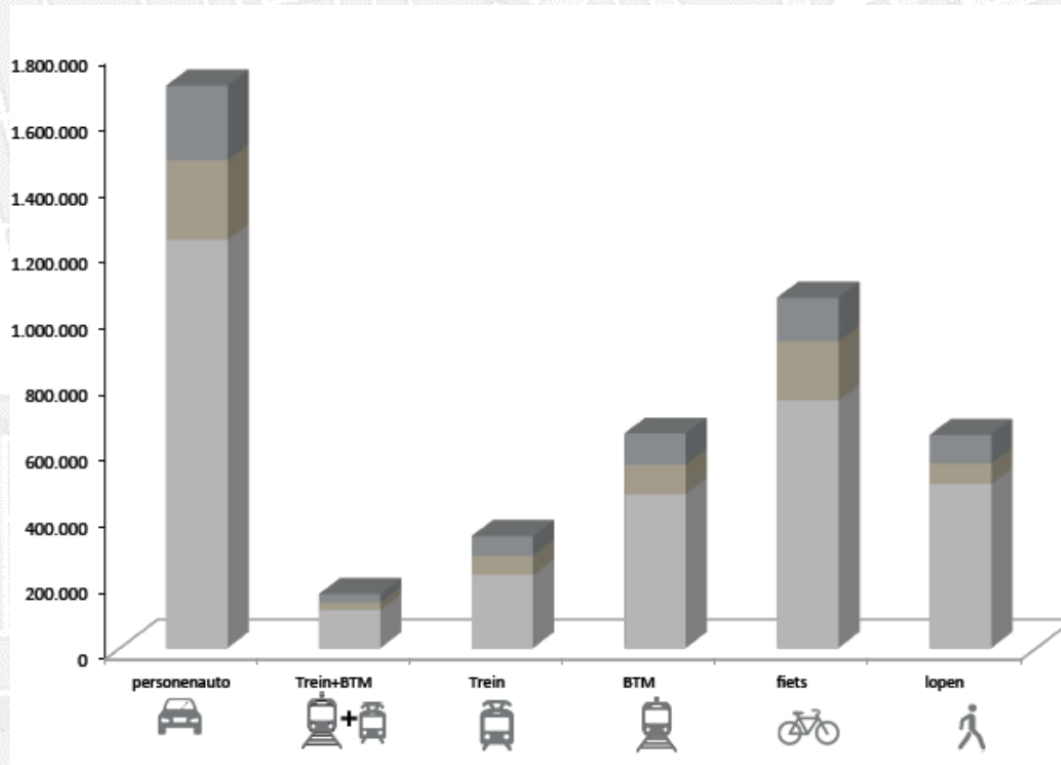


○ Funding Sustainable Public Transport in Amsterdam

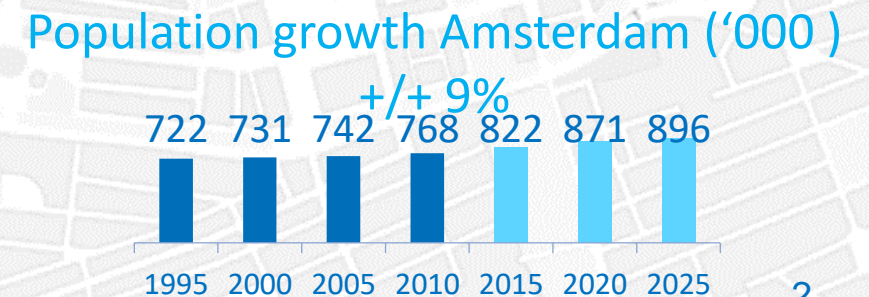
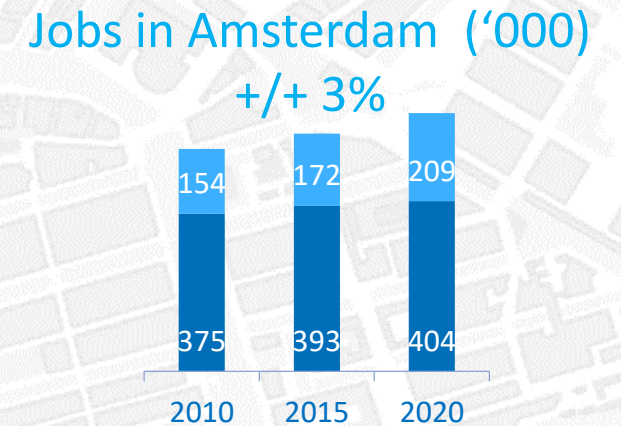
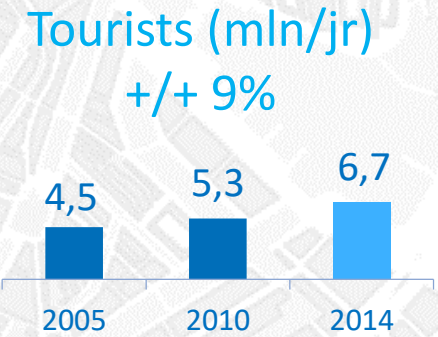
Covenant of Mayors' Investment Forum – Energy Efficiency Finance Market Place
Talitha Koek, CSR manager GVB (public transport operator Amsterdam)

Amsterdam's rapid growth 2025

Means 40% increase of daily mobility movements



Development locations
+100.000 dwellings



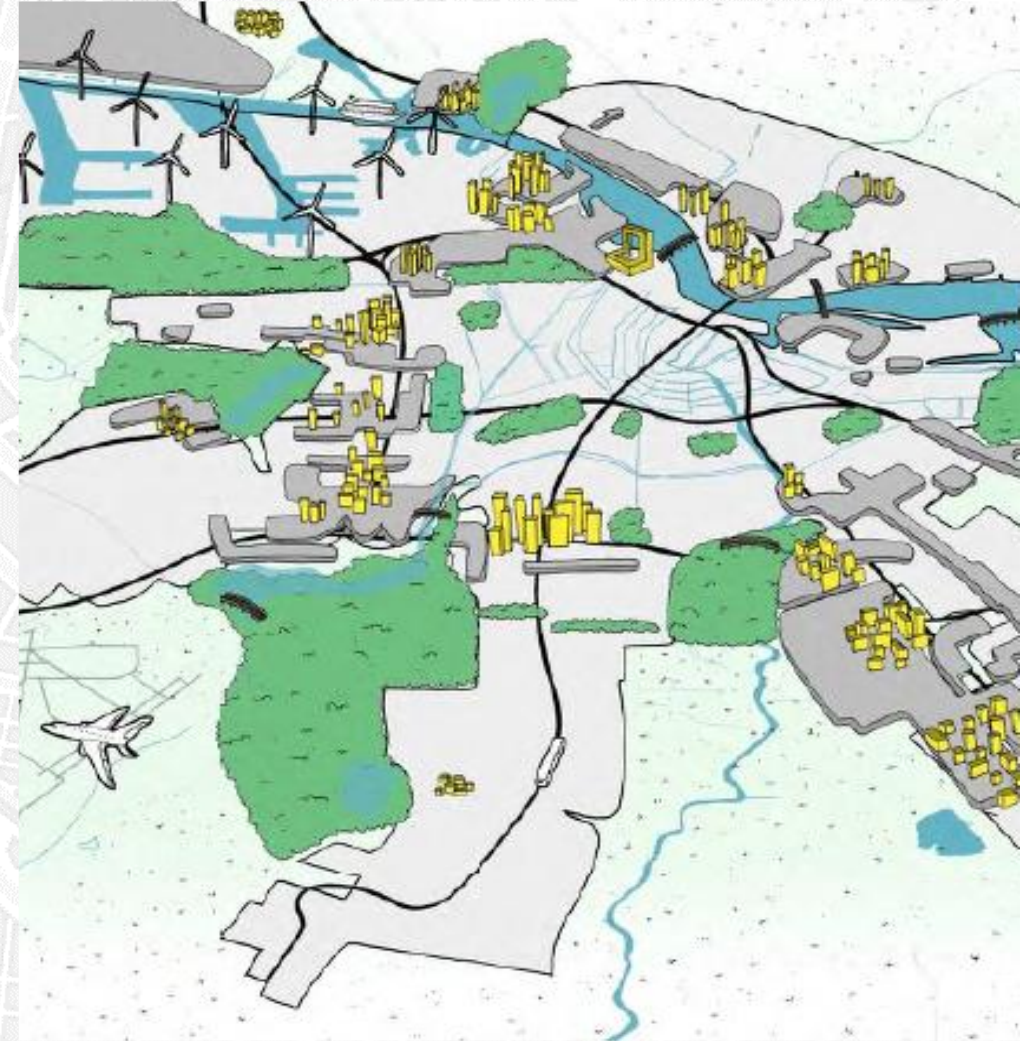
Policy objective: cleaner air, fewer cars

City of Amsterdam policy package:

- Clean Air Program 2018
- Car free Centre Agenda 2020

Fewer cars means more cycling, walking and public transport, central in policy making.

Modal split moves from car first to car last



Smart City Mobility Concept Amsterdam

- Objectives ELENA project 2017-2021

Zero emission buses: replacement of 69 (out of 203) diesel buses by 2022

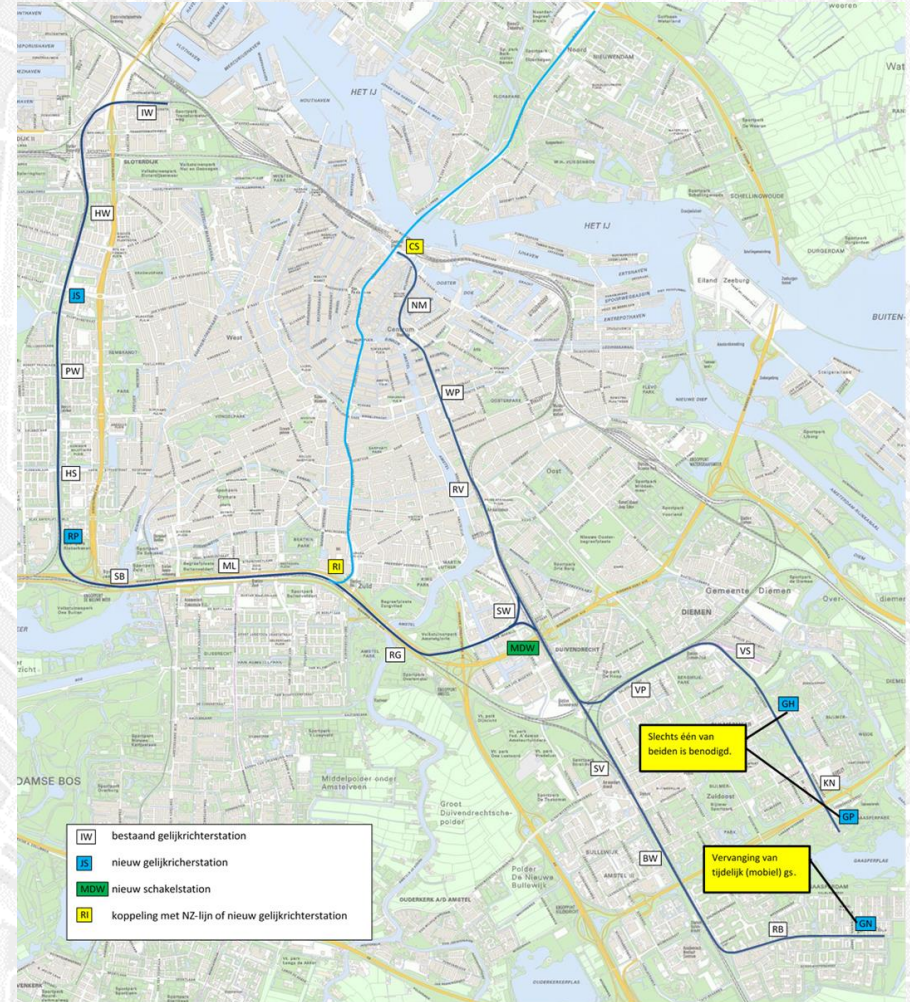


Zero emission ferries: replacement of 7 diesel engine ferries (out of 20) by 2022

Smart City Mobility Concept Amsterdam

Not only zero emission, also smarter

Developing smart IT solutions for first and last mile (MaaS), making public transport more attractive by shared e-mobility, bikes



Re-using the braking energy of the 5 metro lines, improving energy efficiency by 10%

What issues did the project encounter?

Duration of the project is October 2017 – October 2021

- GVB is moving into new markets and new roles, this raises many questions that the project helps to tackle:
 - Zero emission technology: What zero emission bus or ferry solution is best for Amsterdam, with its densely populated, already contested space?
 - Implementation: How to develop an electric bus operation next to the existing diesel bus operation? How to prepare and train staff?
 - Scope of activities: What is the role of a traditional public transport company in Mobility as a Service, how do we service door to door travel?
 - Merging of mobility and energy: How will energy efficiency and flexibility play a role in a single energy use transport system?

Progress thus far - results

Zero emission buses

- 31 ZE buses are being implemented Q1
- 2020 - 13 ZE buses will be ordered
- 2021 – order of 68 ZE buses

Zero emission ferries

- 4 hybrid ferries in operation
- 8 more into operation this year (5 fully electric)

Smart IT solutions

- New ticketing system EMV is being implemented
- Tender MaaS platform has started after extensive research

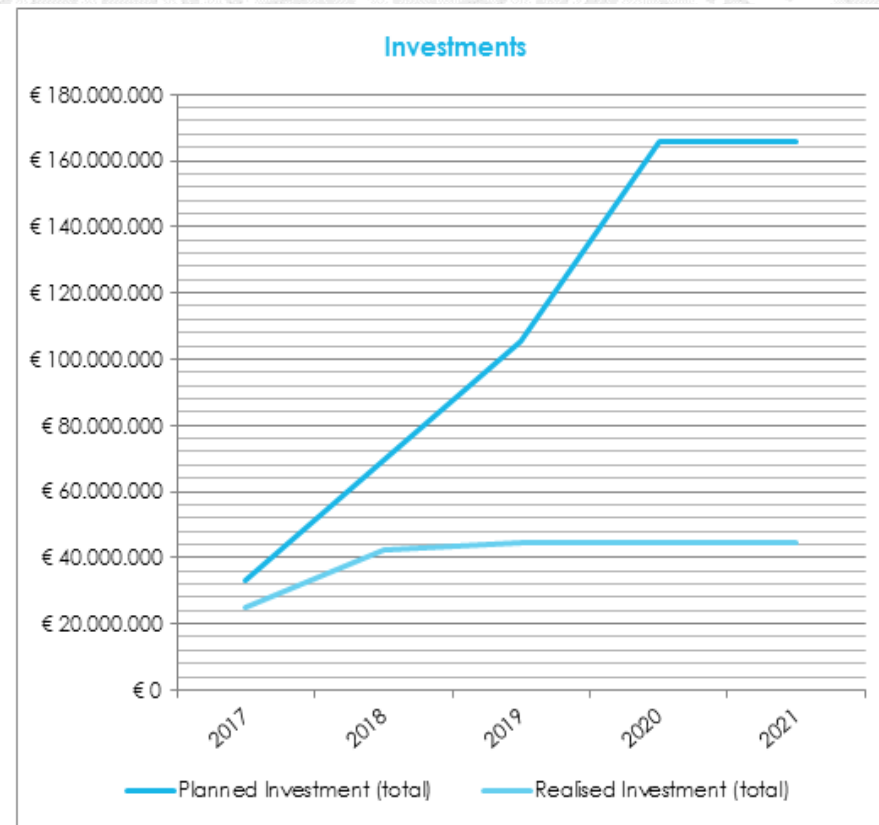
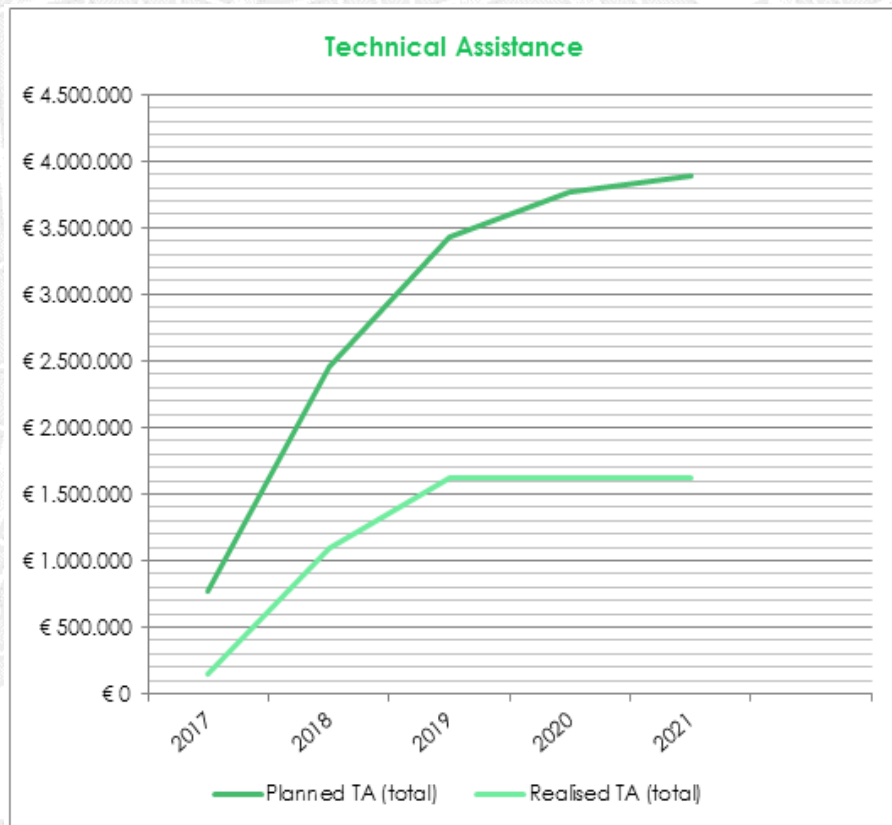
Energy efficiency metro

- Study into business case for re-using braking energy is almost finished



Progress thus far (finances)

- ▶ Ultimate goal is to accelerate sustainable investments: with €3.9 million technical assistance from ELENA, €165.8 million investments is leveraged
- ▶ End of 2019, 42% of the funding was spent and 27% of investments done



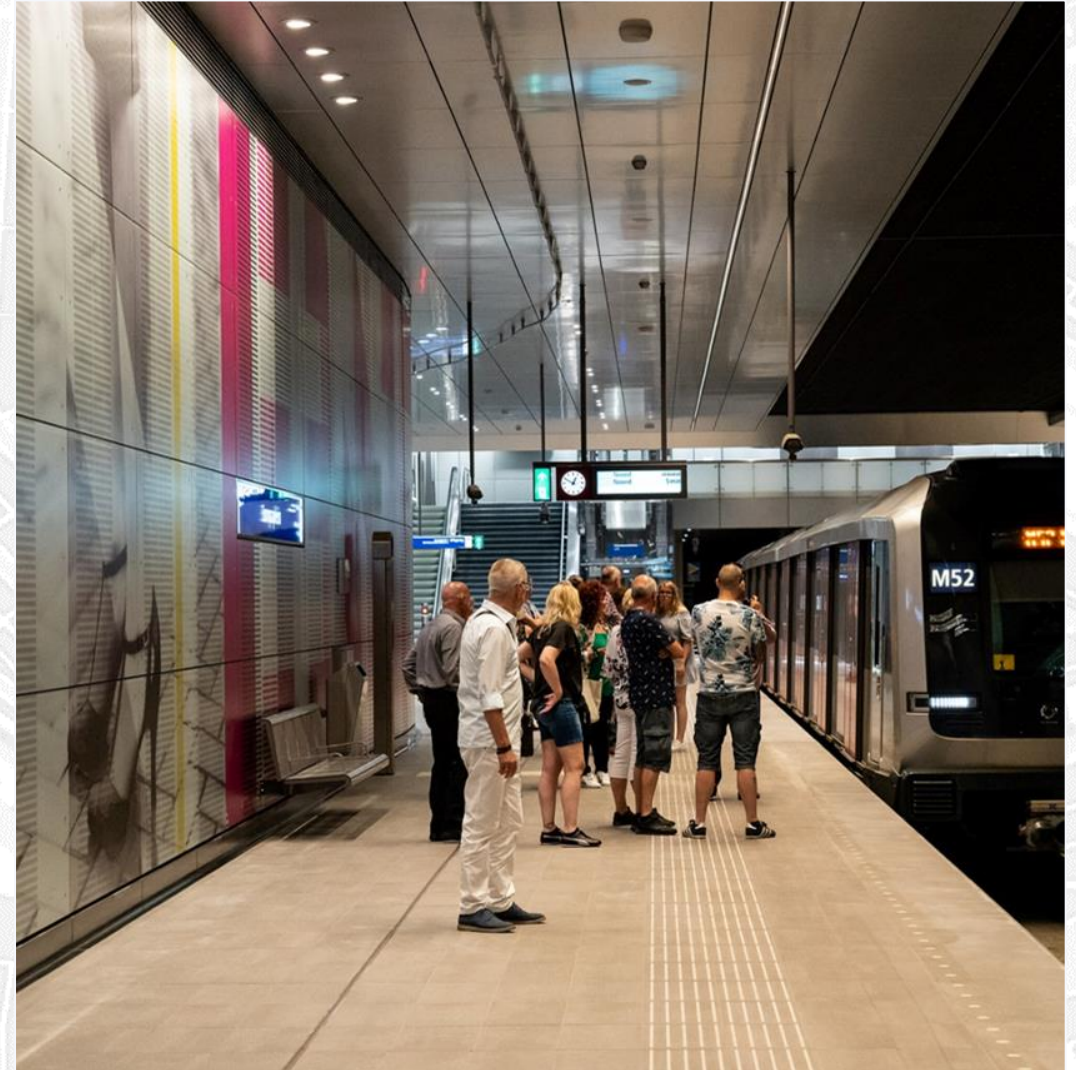
Next steps

Together with the City of Amsterdam and Public transport authority the zero emission strategy 2025 evolves

More buses, ferries and charging stations are needed than expected

Moving from the rolling stock to more special and complex vehicles (maintenance lorries, heavy equipment)

This year GVB applied for the CEF blending call: 124 new ZE buses and 4 fast charging stations



Lessons learned

- ▶ It takes a great deal of time to write (1 year) a proposal and implement the project (1 year)
- ▶ Co-creation with EIB, outside existing programmes. The project is developed together and is flexible.
- ▶ Resources to attract expert advice and research, improving quality of decisions
- ▶ Start with you own policy objective or project

