The use of Local Digital Twins to evaluate the impact of mobility choices on air quality

Stijn Vranckx

URBREATH

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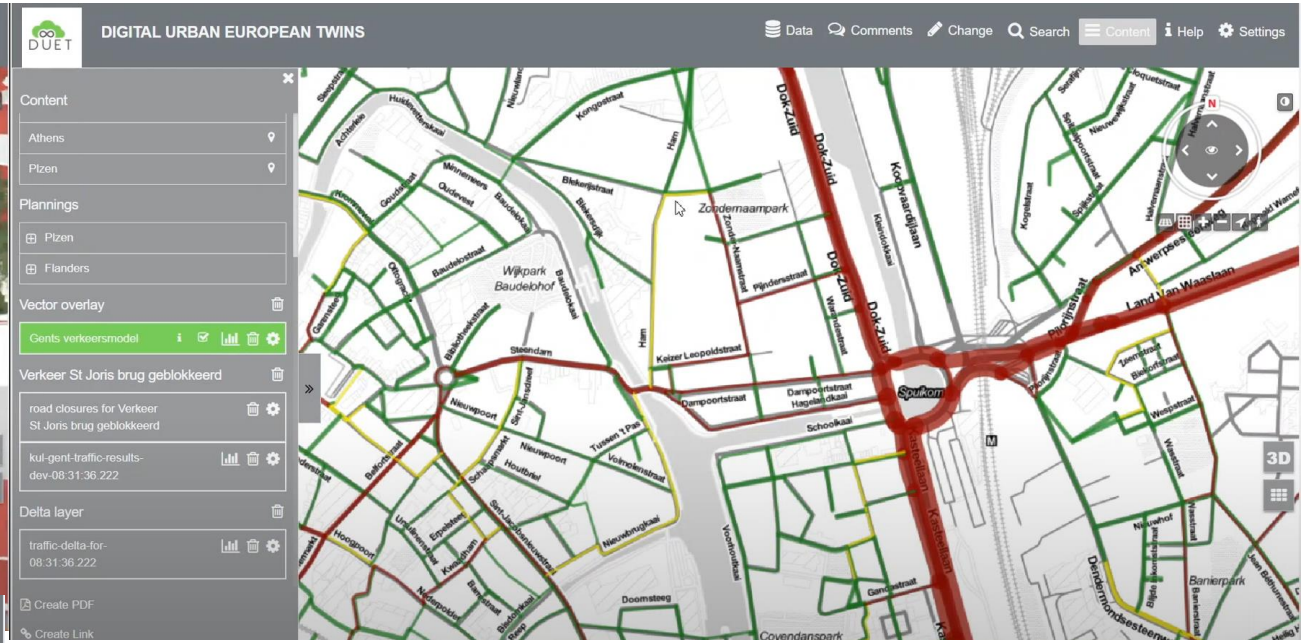
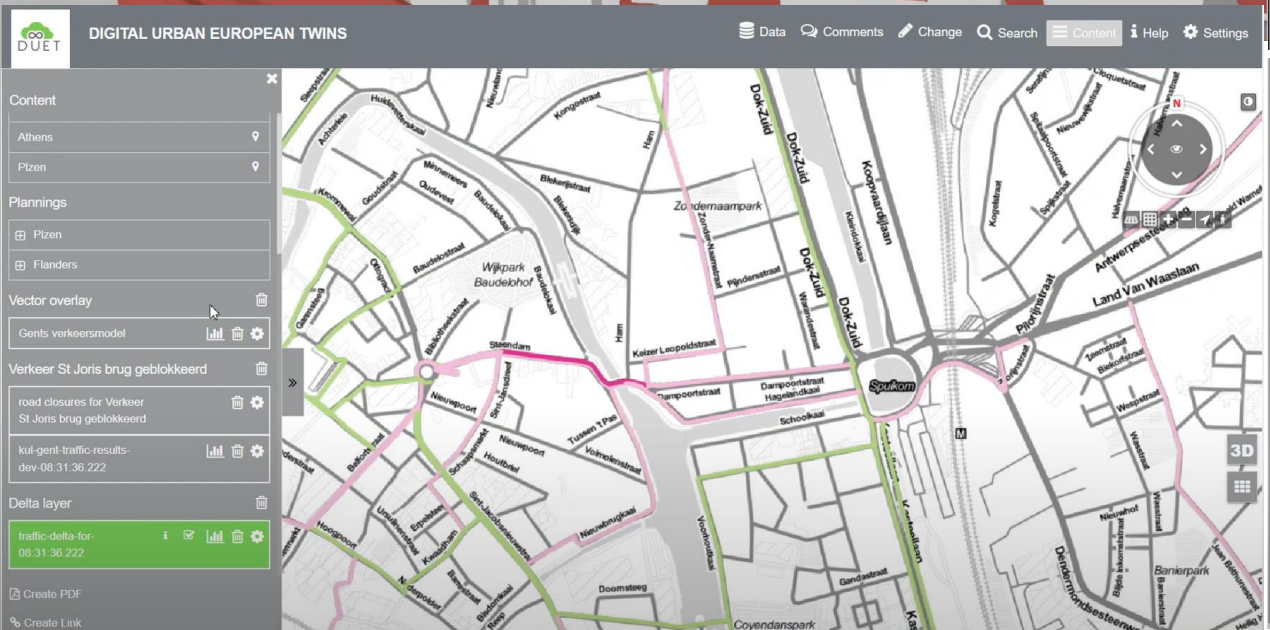
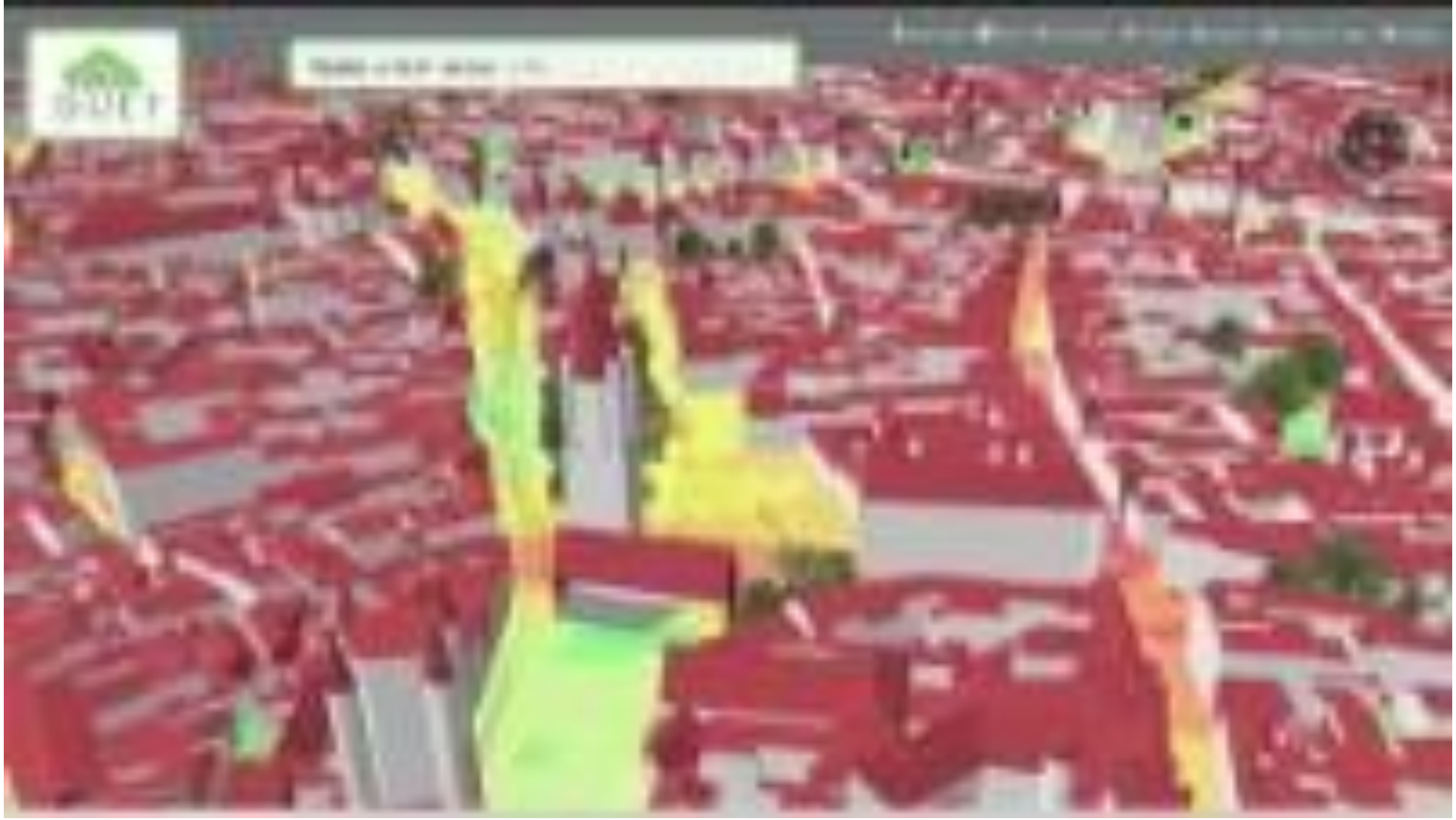
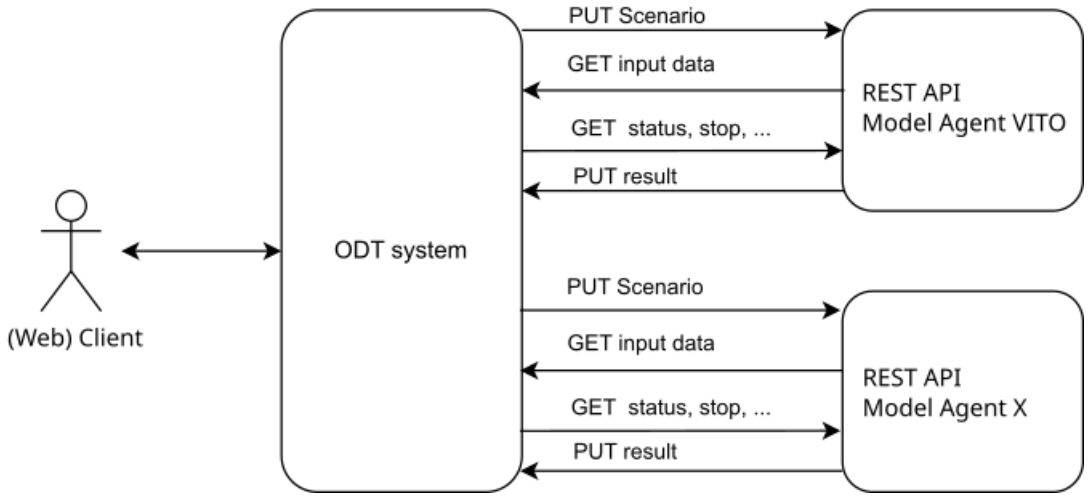
Introduction Local Digital Twin







How to couple an air quality model to a digital twin?

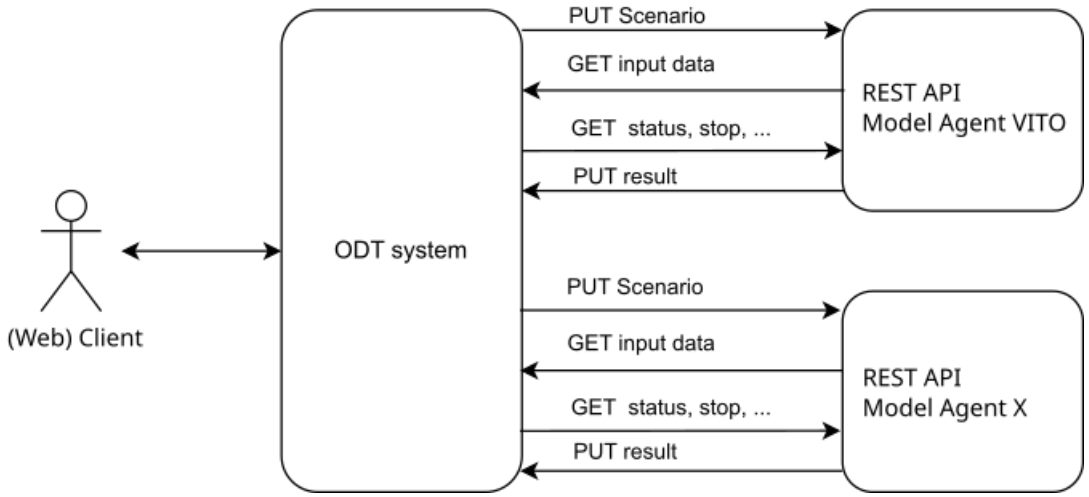


ODT = Open Digital Twin

- **Standardization!**
- **Interoperability!**
- **Fast Simulations!**

How to couple an air quality model to a digital twin?

Perfection?



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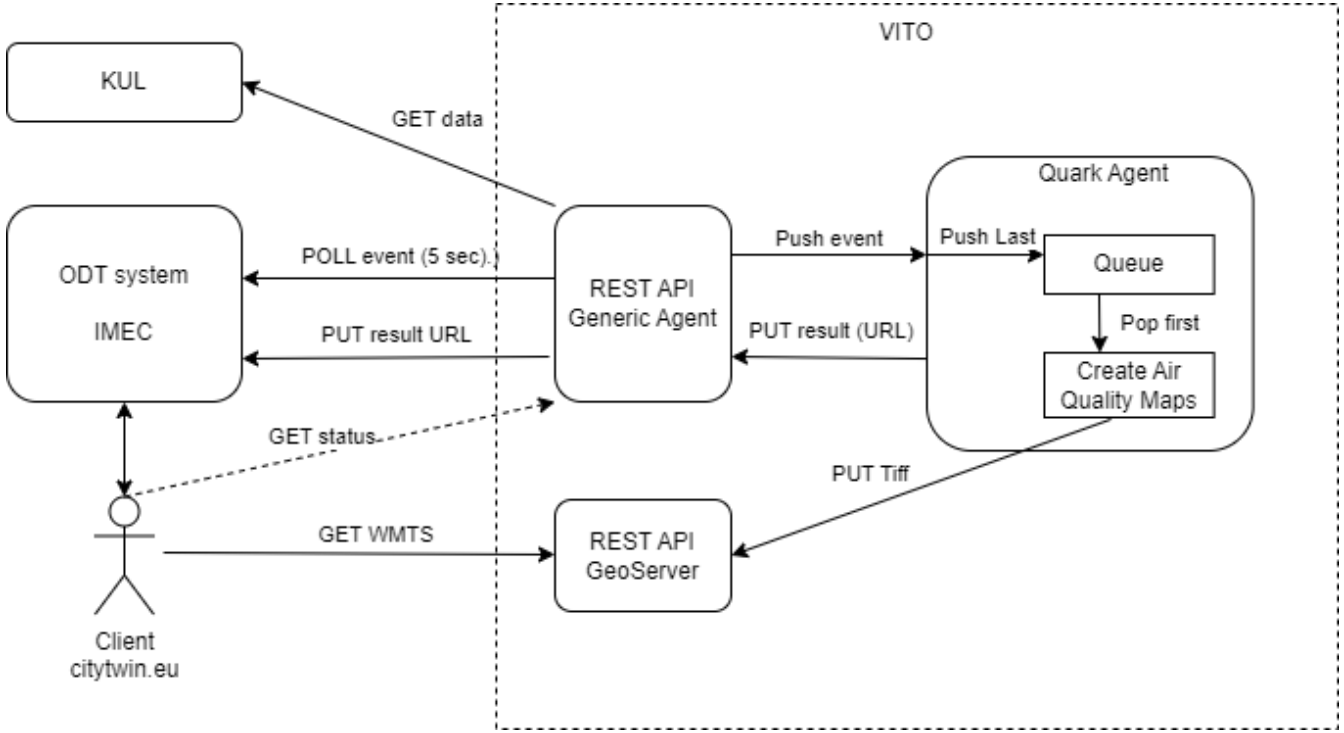
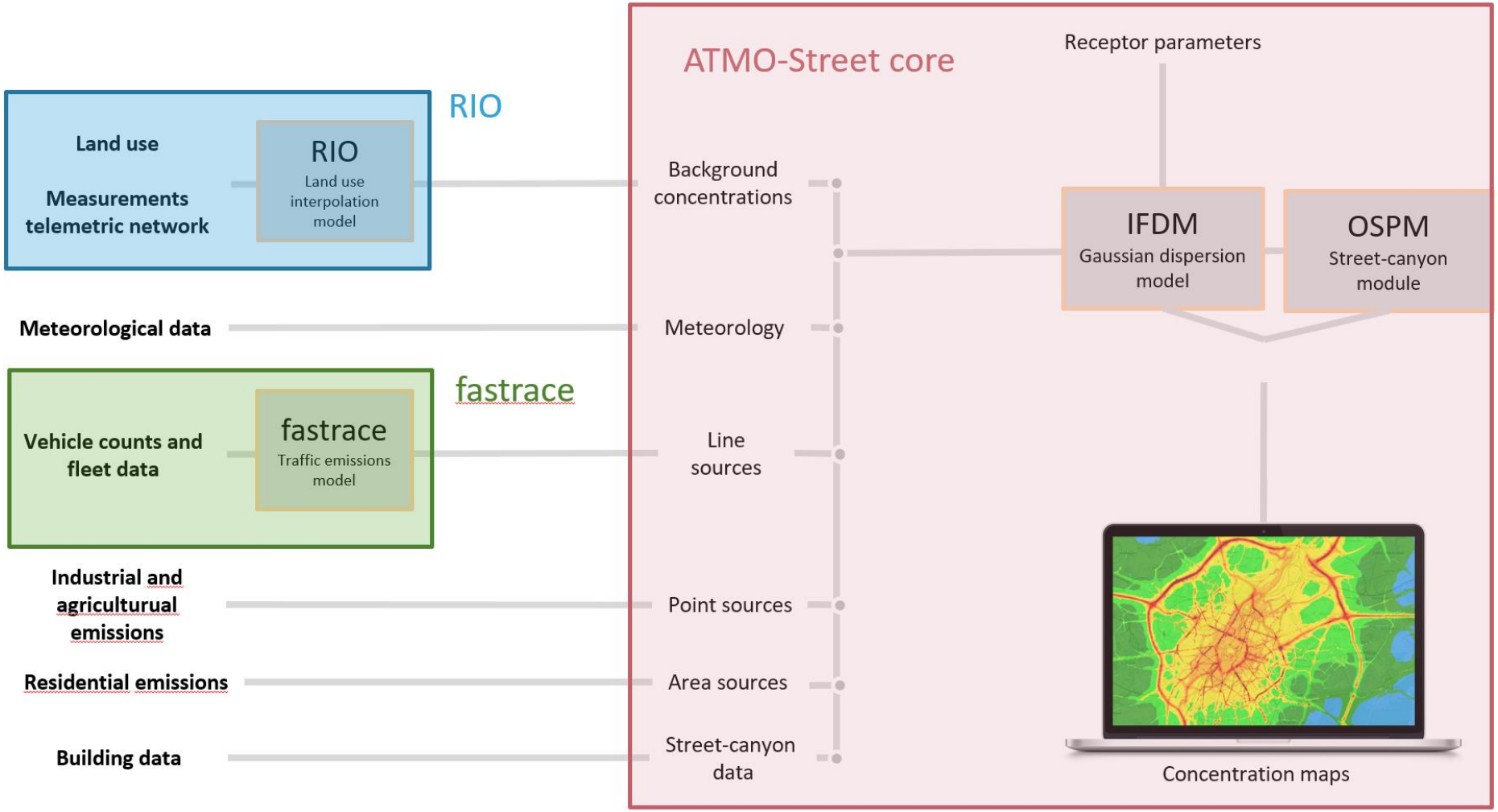
Reality?



Which Air Quality model to integrate?



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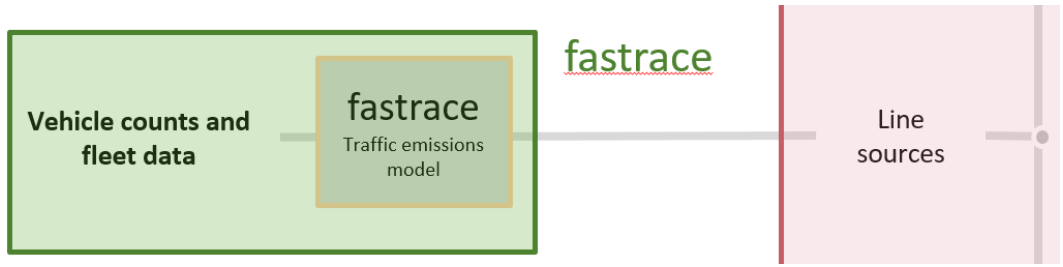

Fast screening with

pre-calculated annual concentration kernels

Ref: Degrauwe et al. (2024) Environ. Modelling and Software, A source apportionment and air quality planning methodology for NO2 pollution from traffic and other sources

More information?

https://atmosys.vito.be/

https://urbreath.eu/

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