

Everimpact°

CO2 concentration recordings into flux

Baptiste URGELL - January 2023

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CO₂ concentration & Other data

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Data required

Meteorological

- CO2 Concentrations
- Wind direction & speed
- Atmospheric stability
- Temperature

Source information

- Location
- Height

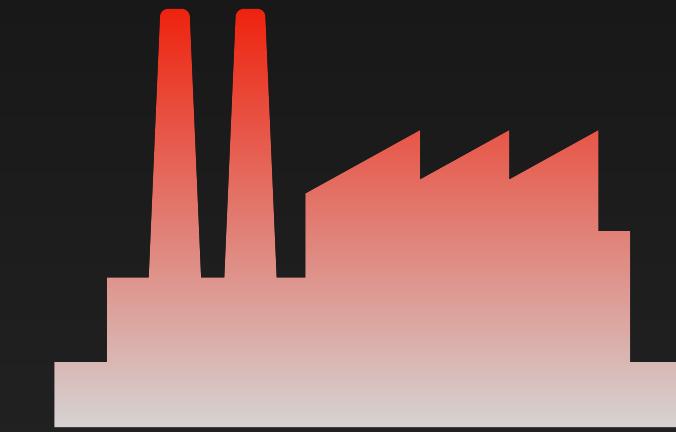
Terrain information

- Elevation
- Land use

Sensor localisation



Along the road network



Near from significant CO₂ source



Around the city

Dispersion model selection & validation

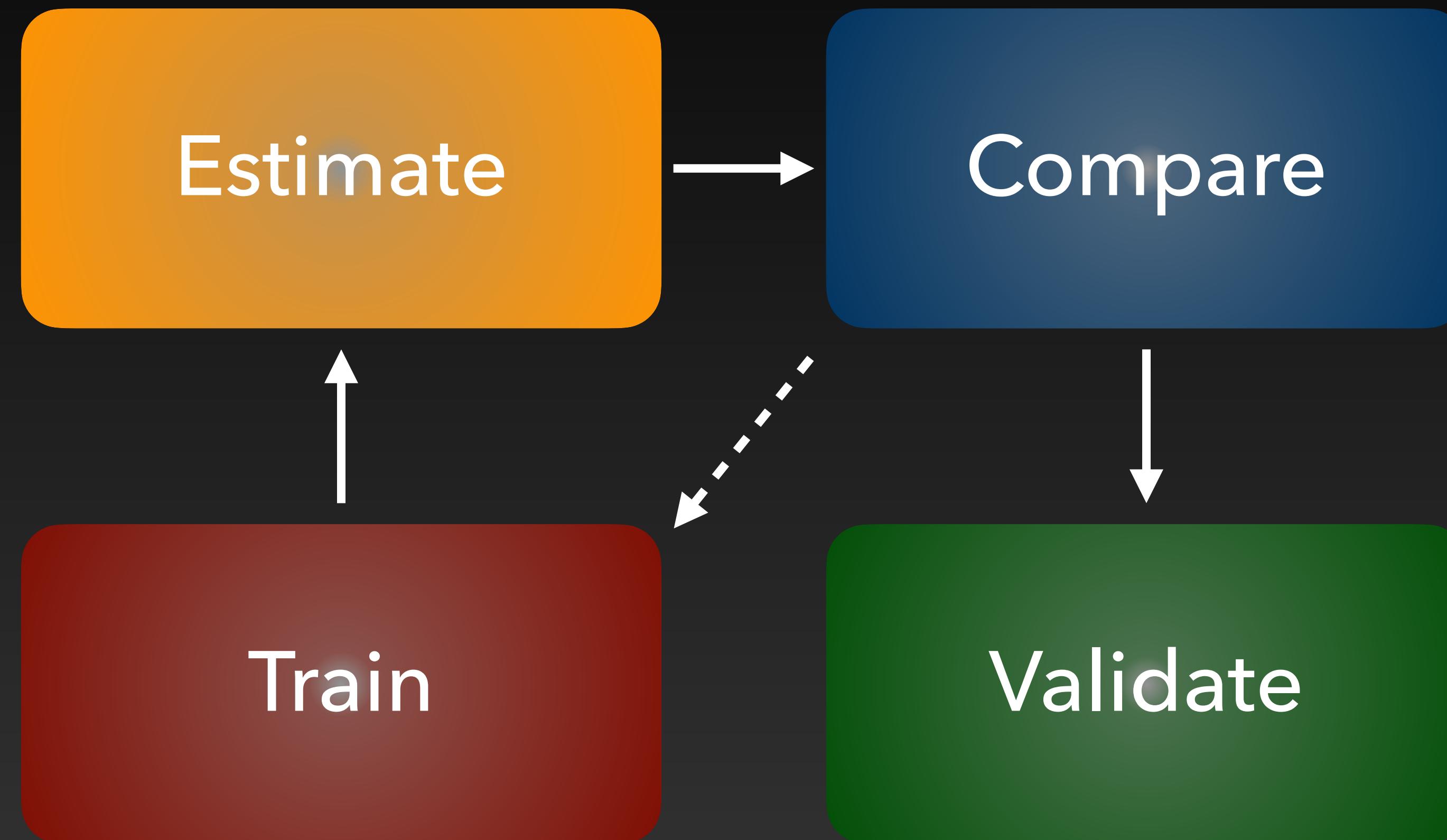
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Dispersion model selection

- Reynolds-Averaged Navier-Stokes (RANS) Model
- Hybrid model (Lagrangian particle dispersion and Eulerian grid)
- Deep Learning model (LSTM or Time Series Transformers)

Comparison Results / Reality



Convert the flux to units of tCO₂ per unit of surface per unit of time (e.g. tCO₂ m⁻² year⁻¹)