

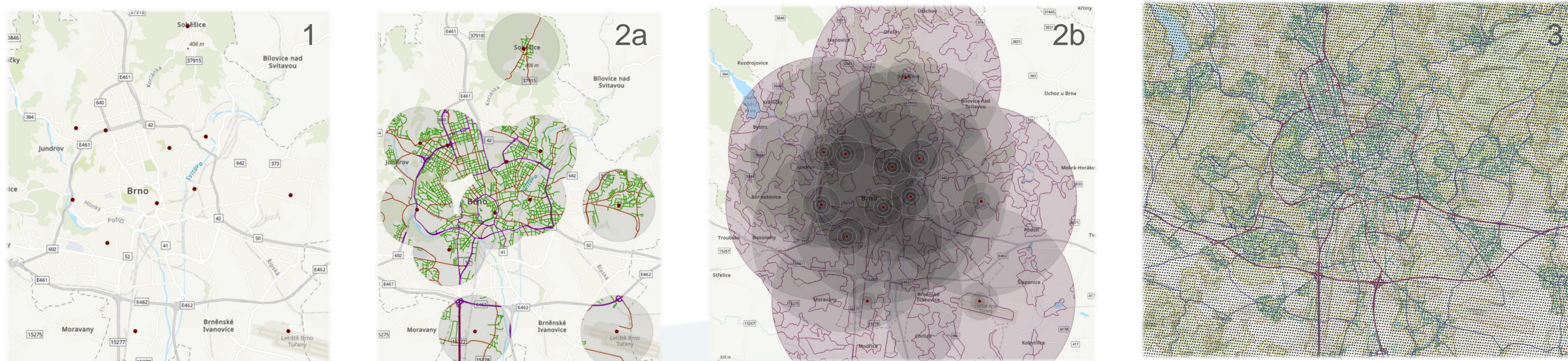
Research of potential exposure to chemicals in urban exposome

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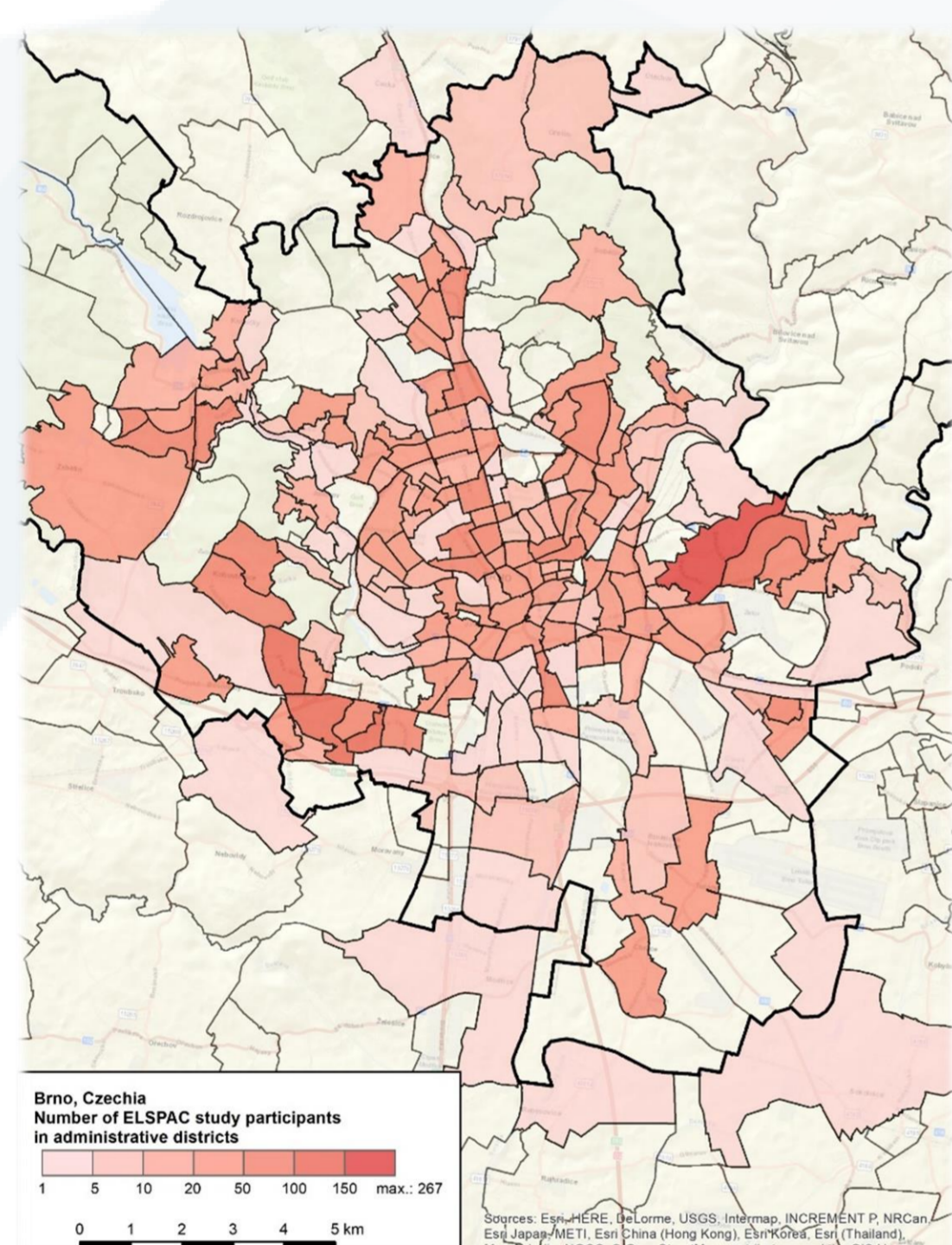
Historical LandUse Regression model for city of Brno



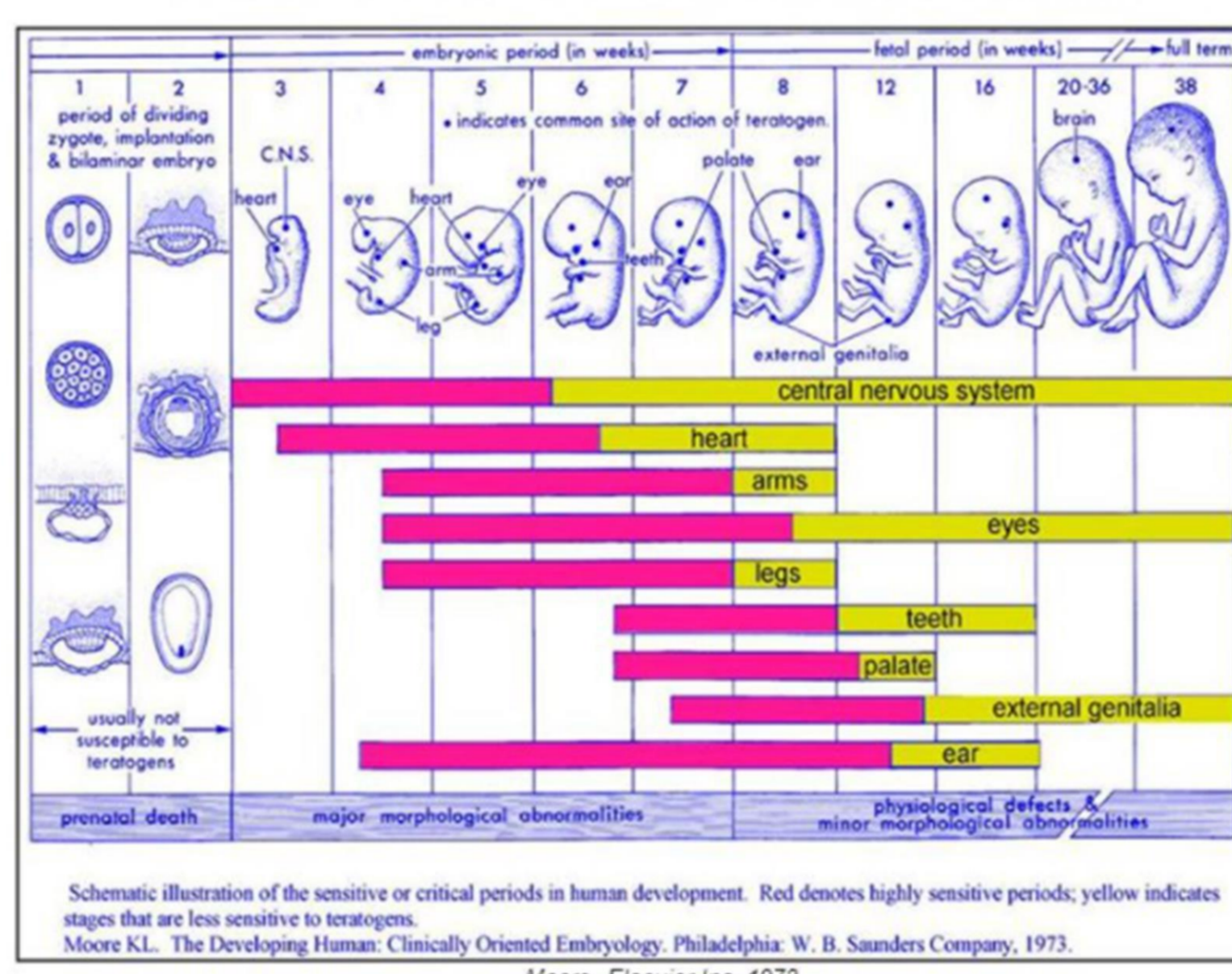
- (1) Monitoring stations in Brno (1990s) – SO₂, SPM, NO₂, NO_x
- (2a) Roads, (2b) land use & other variables (elevation, population, built area, meteorological data)
- (3) Grid (100×100 m) – prediction of concentrations for each cohort (ELSPAC) participant
- LUR (86 variables for ca 5,000 participants) & birth outcomes



European Longitudinal Study of Pregnancy And Childhood



DYNAMIC DEVELOPMENTAL PHYSIOLOGY WINDOWS OF DEVELOPMENT

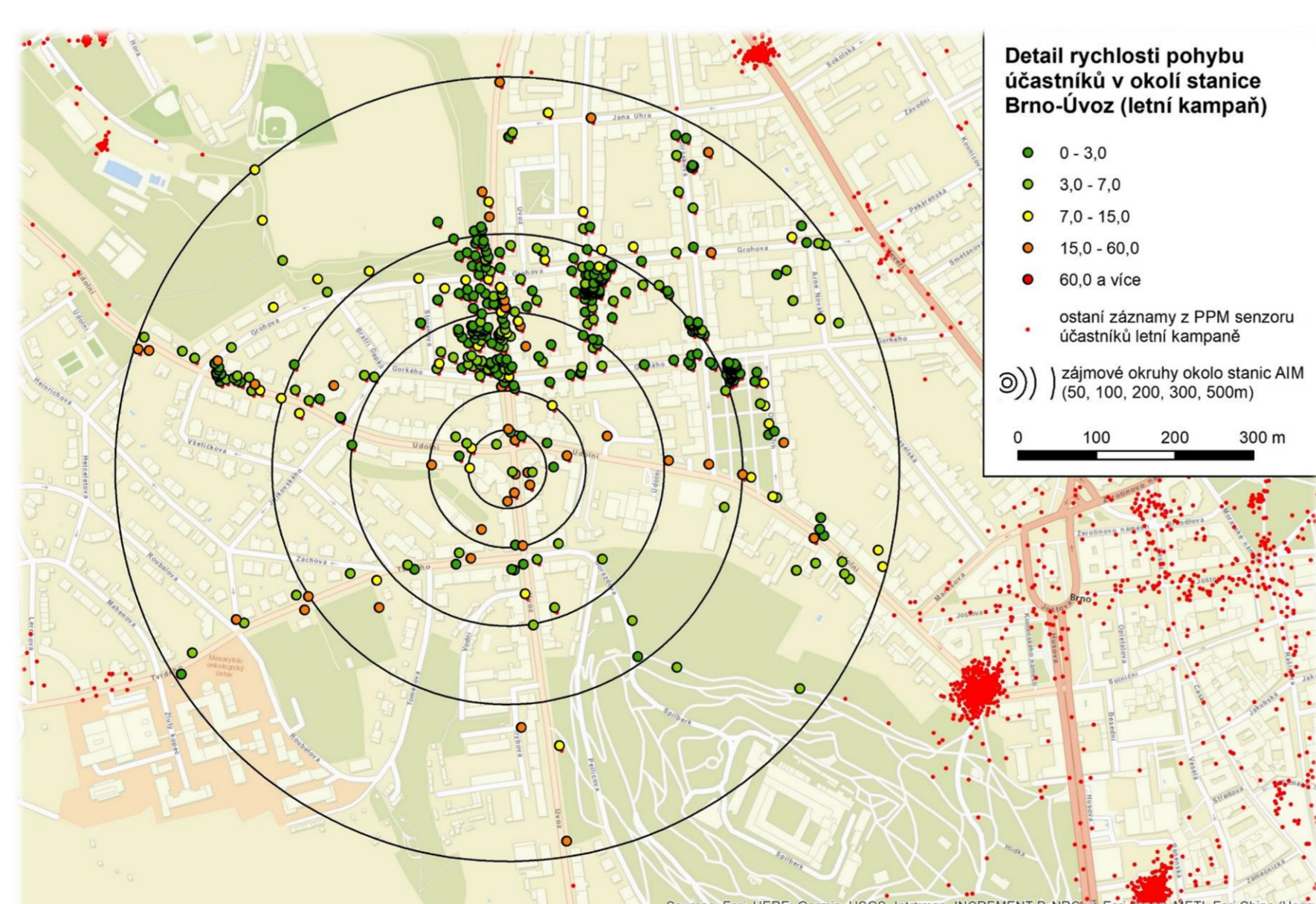


- First 1,000 days of life (1990+)
- Respiratory health outcomes
- Later evaluation with CELSPAC
- Moving geocoded
- Potentially 1995 – 2000 – 2005



Integrated Climate and Air pollution Reduction in Urban Systems

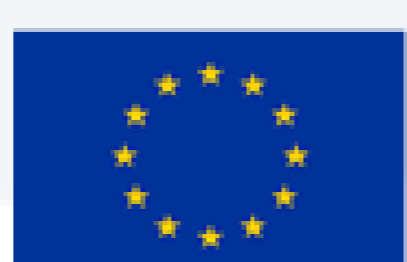
- Multi-sensor personal campaign
- Up to 1,000,000 time points measured
- AQ, physical activity, heart beat, personal & households characteristics
- (4) AQ & sleep, (5) activity/spatial/personal exposure characteristics



Additional collaboration

- Eva Klemmová Gregušková - Genotoxic effects of transboundary pollutants in *Pinus mugo* in the high mountain habitats of the Western Carpathians
- CELSPAC – SPECIMEn, URBAN AQ: Health

URBANX



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