Cross-border road transport infrastructure in the European Union

Data dictionary

- **Id** : Unique identifier for each 1km x 1km grid cell
- **Coord_x**: Longitude of centre of 1km x 1km grid cell
- **Coord_y**: Latitude of centre of 1km x 1km grid cell
- **NUTS3_2013**: NUTS3 zone[1] the grid cell belongs to
- **Country**: Country the grid cell belongs to
- **Neighbouring_Country**: Country across the border[2]
- **Border_code**: Combination of "Country" and "Neighbouring_Country"; "T" indicates that the border is terrestrial
- **Cell_Population**: Population within each 1km x 1km grid cell
- **Accessible_Population_National /Accessible_Population_Interational:**
  Sum of population within 75 km of each cell (on national side/ international side respectively)
- **Location_Indicator_National, Location_Indicator_International**:
  Travel time weighted by the population of the five largest settlements (on national and international side respectively):

$$LI_i = \frac{\sum_{j=1}^{n} t_{ij} P_j}{\sum_{j=1}^{n} P_j}$$

- **Potential_Accessibility_National, Potential_Accessibility_International**:
  Weighted average of population of five largest settlements (on national and international side respectively) divided by travel time from each grid cell

$$PA_i = \frac{\sum_{j=1}^{n} P_j}{\sum_{j=1}^{n} t_{ij}}$$

- **Network_Efficiency_National , Network_Efficiency_International**:
  Ratio of actual network efficiency to maximum network efficiency (weighted by travel time to five largest settlements (on national and international side respectively)

$$NER_i = \frac{1}{NE_i} \; where:$$

$$NE_i = \frac{\sum_{j=1}^{n} \frac{t_{ij}}{t'_{ij}} P_j}{\sum_{j=1}^{n} P_j}$$

[1] European Nomenclature of territorial units for statistics: http://ec.europa.eu/eurostat/web/nuts

[2] A specific cell may be located near multiple borders. In such cases additional records corresponding to each different border are added for the cell