Swedish example on 11.2.1, Access to public transport

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SDG Indicator Tests by Countries in Europe

- GEOSTAT 3: ESS Project with a purpose to guide countries in Europe how to implement the Global Statistical Geospatial Framework AND to test the how the framework helps in producing SDG indicators

- Statistics Sweden has tested indicators 11.2.1, 11.3.1 and 11.7.1

- Supported also by UN-GGIM: Europe Working Group on Integration, testing 11.2.1, 11.3.1, 11.7.1 and 15.1.1

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Assessment by UN-GGIM: Europe
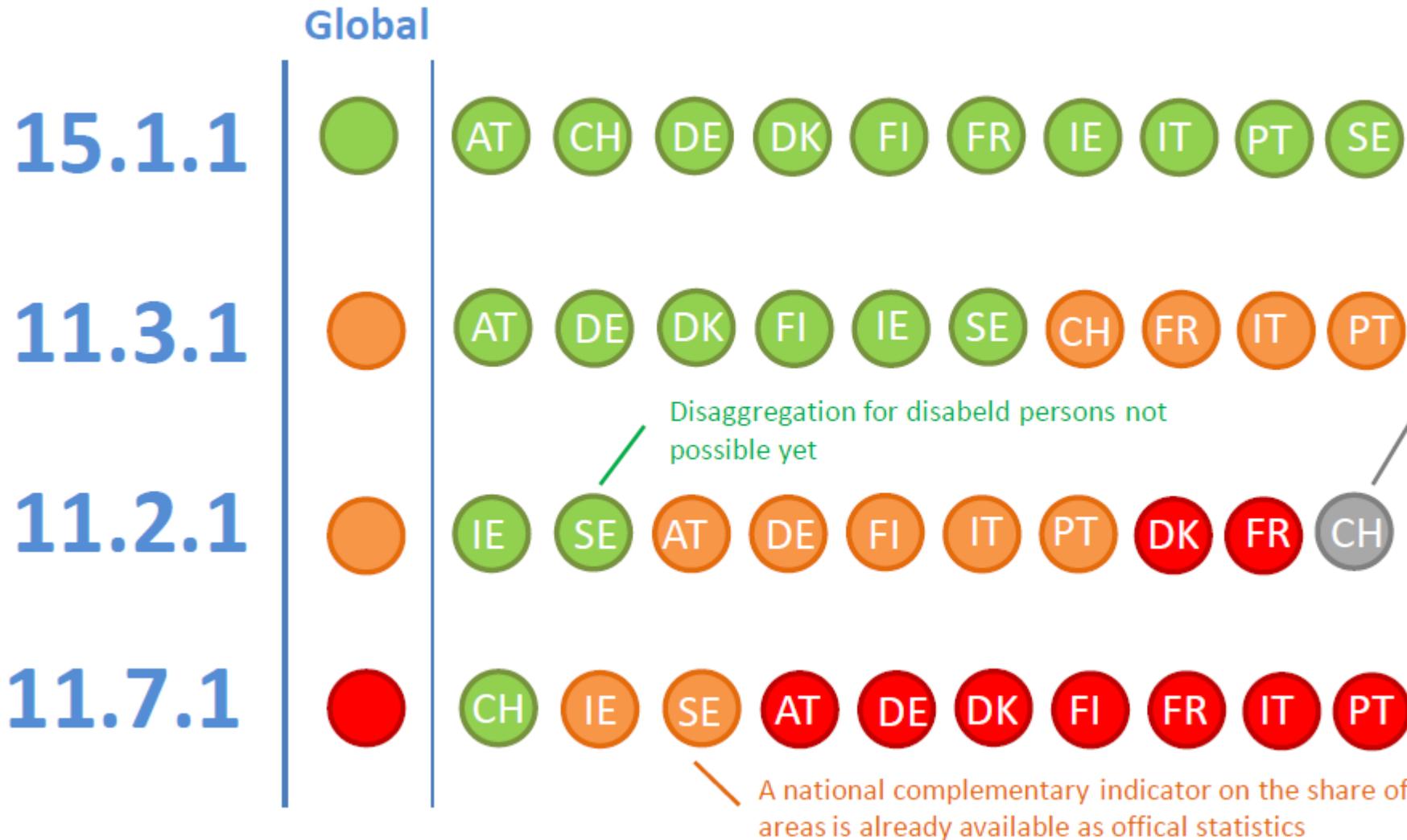
The Global Statistical Geospatial Framework
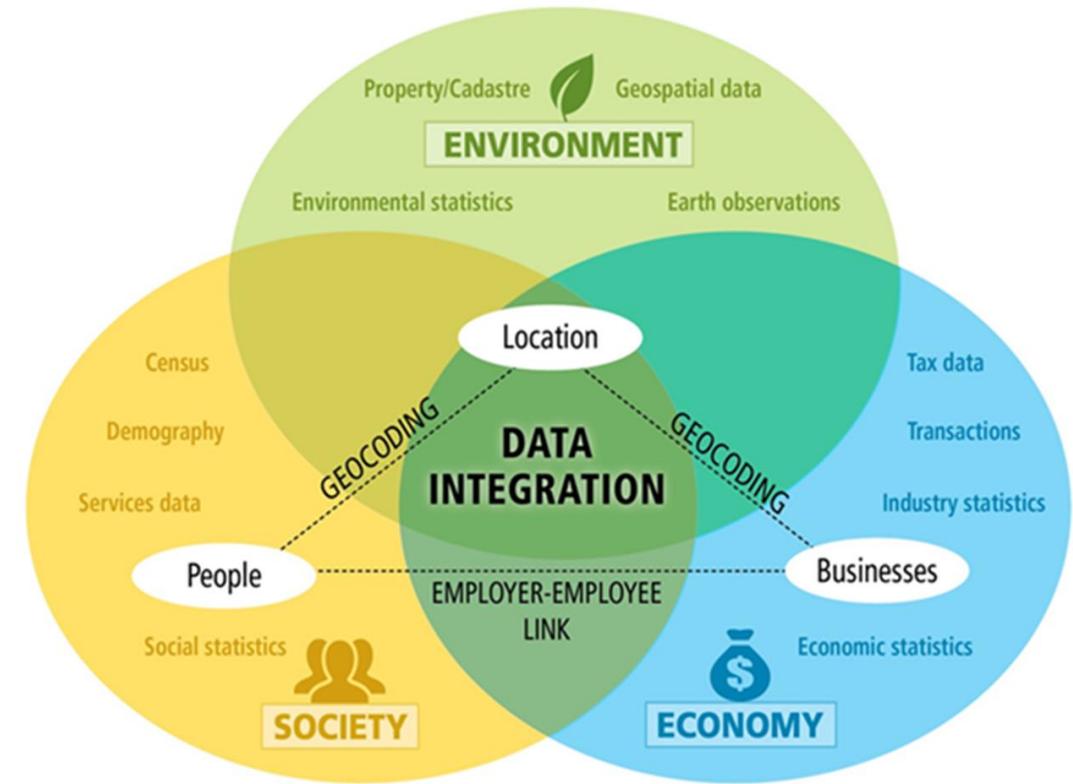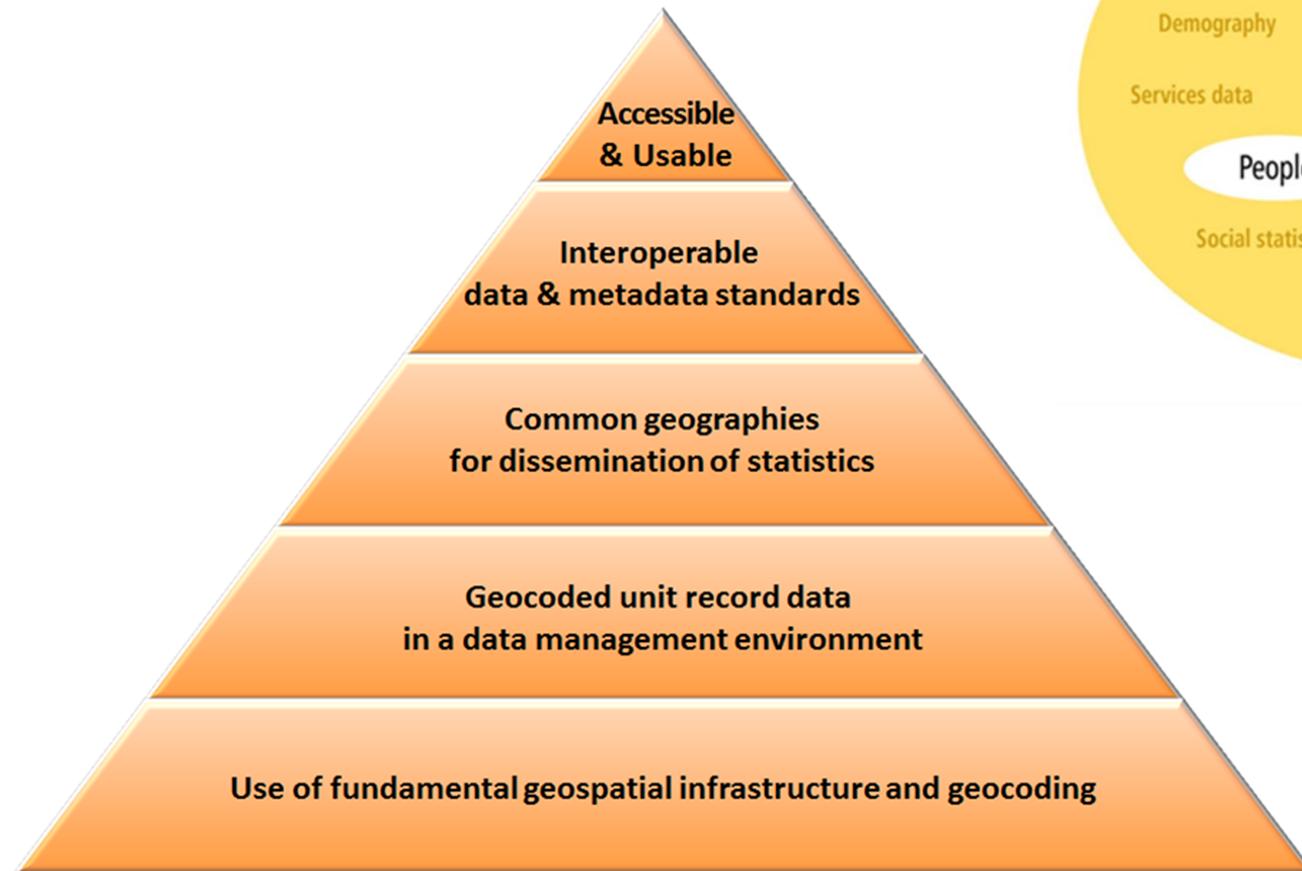
11.2.1: Data and Methods

- Data coming from national authorities, Eurostat and open access data on public transport stops

- Comparing results of National delineations of localities and European urban clusters

- Comparing different network calculation methods
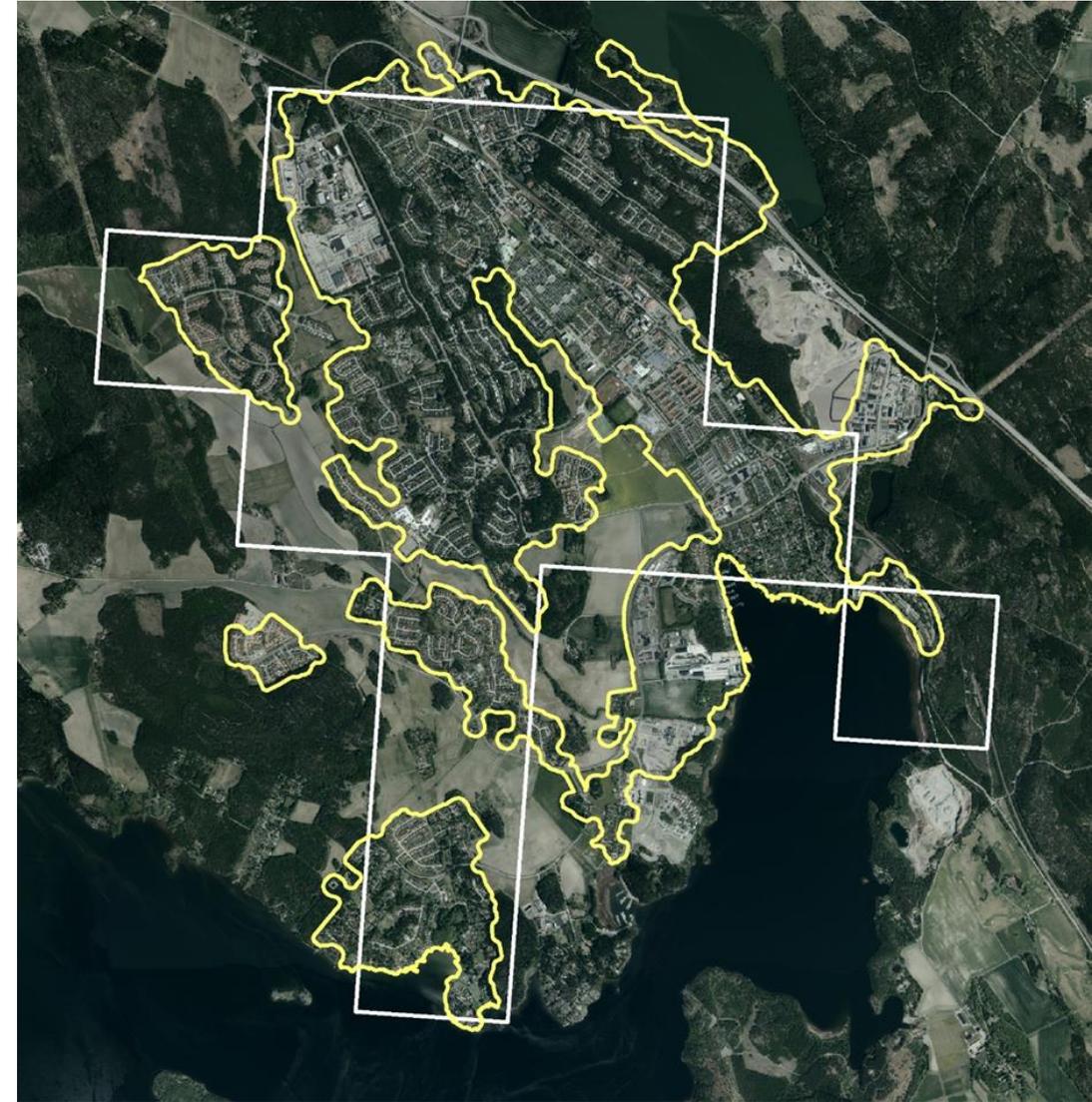
Workflow

- Geocoding population data

- Delimitation of urban agglomerations

- Selection and preparation of public transportation stops

- Computation of service areas

- Calculation of the population within service areas

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Test of different Geospatial Methods

Method	Pros	Cons
Method 1: Euclidian distance buffering	Easy to use, robust and fast.	Does not take barriers into account (e.g. a buffers crossing water, railways etc), resulting in overestimation of the population with convenient access to public transportation
Method 2: Network distance measurement	If street network is complete and includes walkways and bicycle lanes, distance calculations are very accurate and close to truth.	If street network is <u>not</u> complete, the calculations will most likely underestimate the population with convenient access to public transportation. Very demanding and complex calculations.

The GSGF is useful when producing indicator 11.2.1

- Availability of authoritative, point-based location data for geocoding
- Availability of population data from administrative sources, enabling easy, annual updates of the indicator without having to use population estimations
- Use of point-of-entry validation of address information in population registry providing very good conditions for geocoding and few non-matching observations
- Availability of traffic data with national coverage from a trusted provider

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Population within 500 meters from public transport stop 2015

	In urban areas	Outside urban areas	Total
Women	89,6	20,4	81,1
Men	88,9	20,1	79,5
Total	89,3	20,2	80,3

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Share of population with access to public transportation stops* within 400 m from place of residence by municipality 2015

Percent of total population

- 10 - 20
- 21 - 40
- 41 - 60
- 61 - 80
- 81 - 99
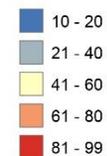
* Stops with at least one departure per hour during business hours (06:00-20:00)

Greater Stockholm

Greater Gothenburg

Greater Malmö