



Measuring Accessibility

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INVESTING IN YOUR FUTURE

What is accessibility?

- main "**product**" of the transport system
- determines the **locational advantage** of an area relative to all areas
- measures the **benefits** households and firms enjoy from the existence and use of transport infrastructure
- > accessibility indicators are transformations of the features of the transport system together with spatial distributions of opportunities into **territorial indicators**

Dimensions of accessibility

- origins
- destinations
- impedance
- constraints
- barriers
- type of transport
- modes
- spatial scale
- equity
- dynamic

Basic types of accessibility indicators

Accessibility is a construct of two functions

$$A_i = \sum_j g(W_j) f(c_{ij})$$

activity function

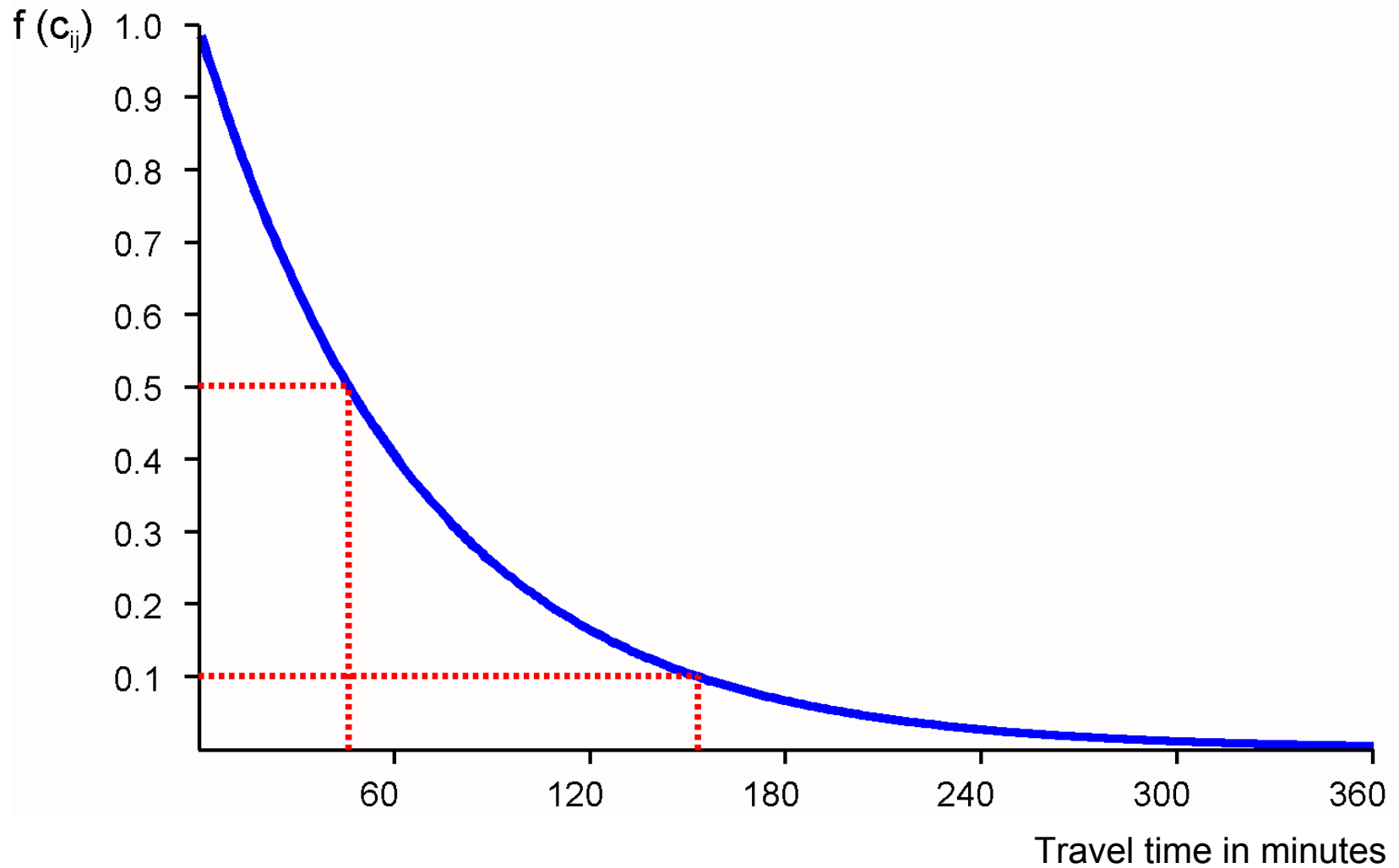
impedance function

Travel cost: Travel cost to a predefined set of activities

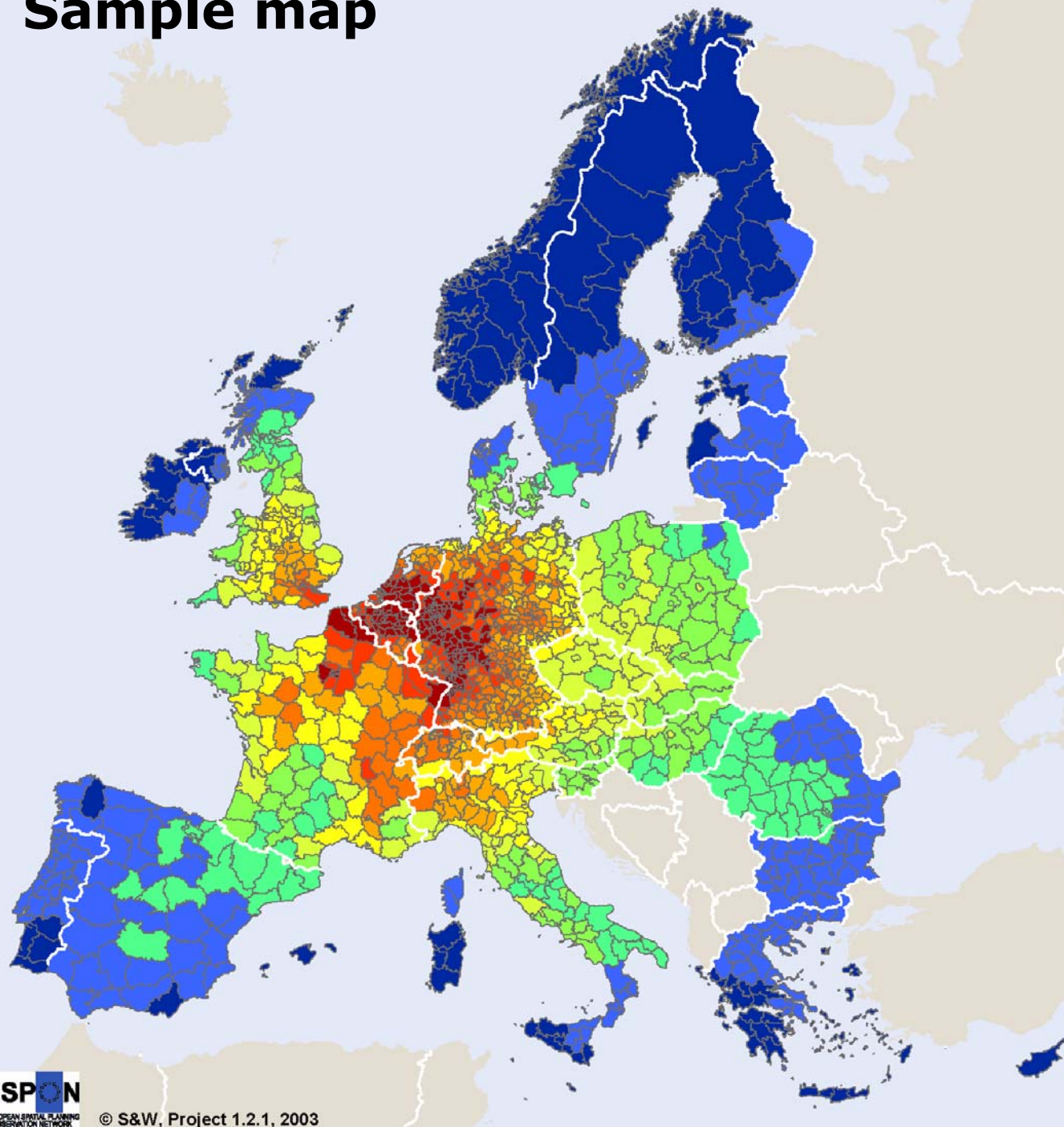
Cummulated opportunities: Activities in a given travel cost

Potential: Activities weighted by a function of travel cost

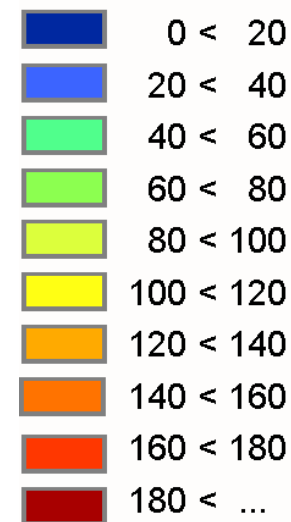
Sample impedance function



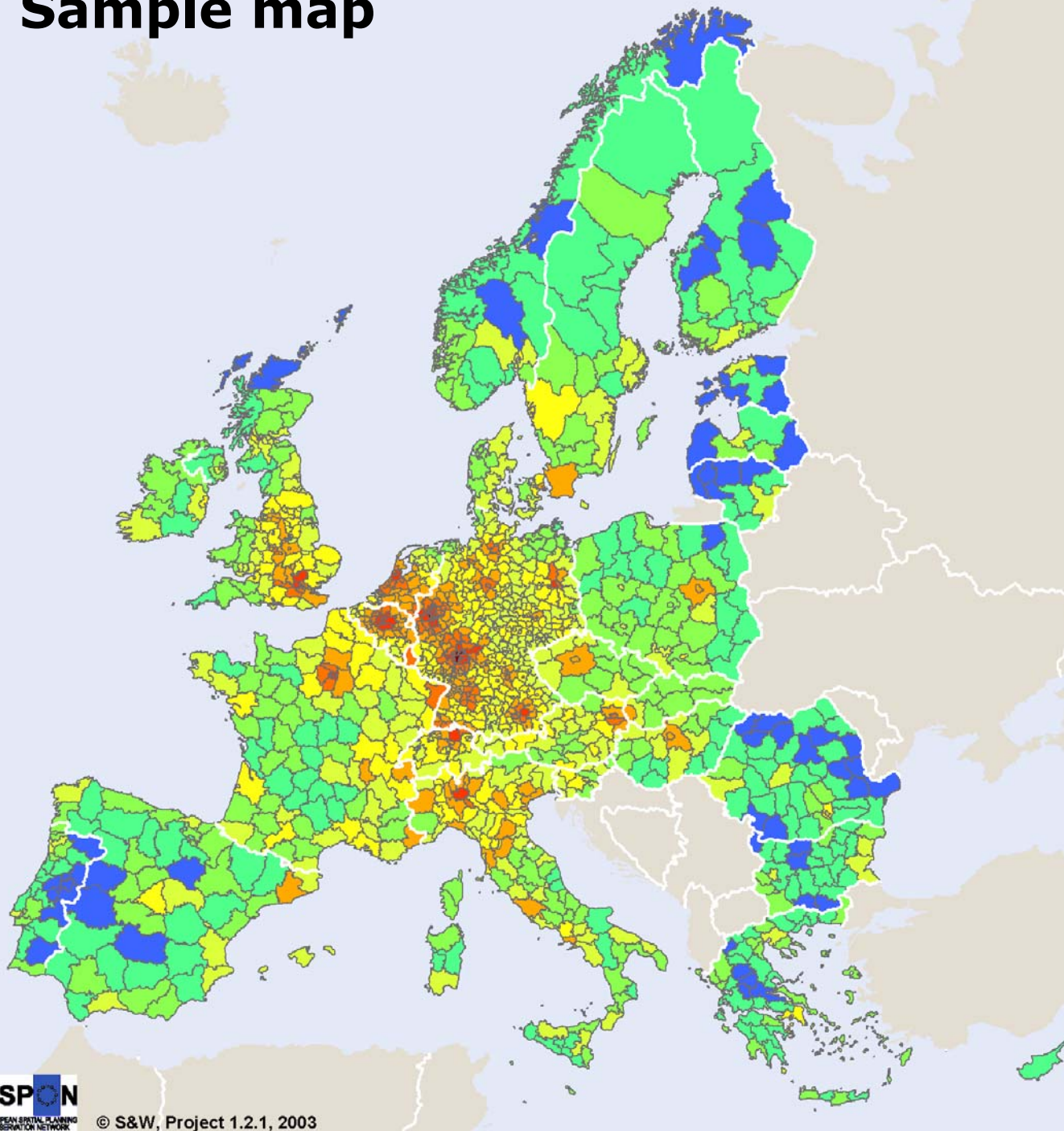
Sample map



Potential
accessibility
rail 2001
(EU27+2=100)



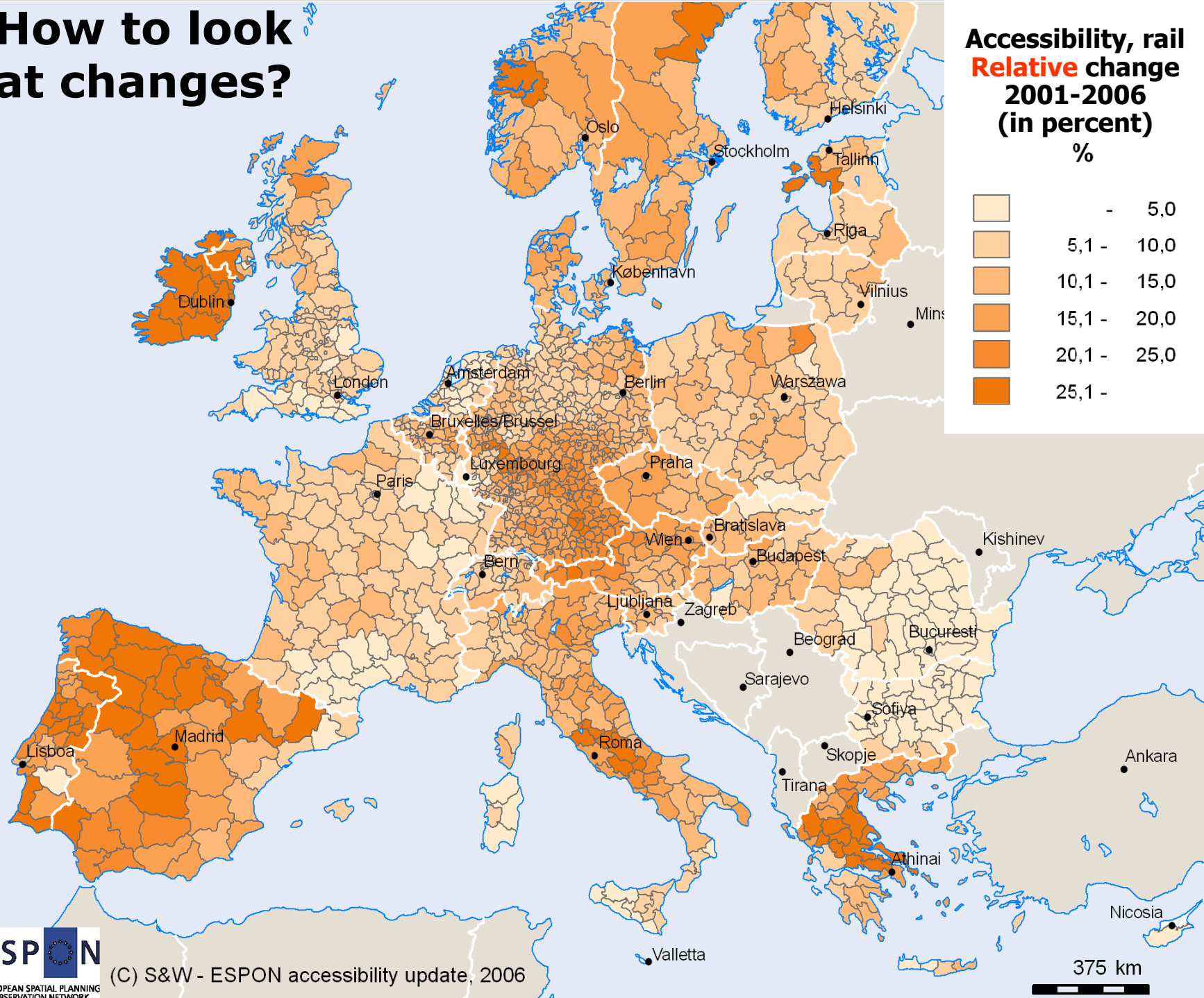
Sample map



Potential
accessibility
multimodal 2001
(EU27+2=100)

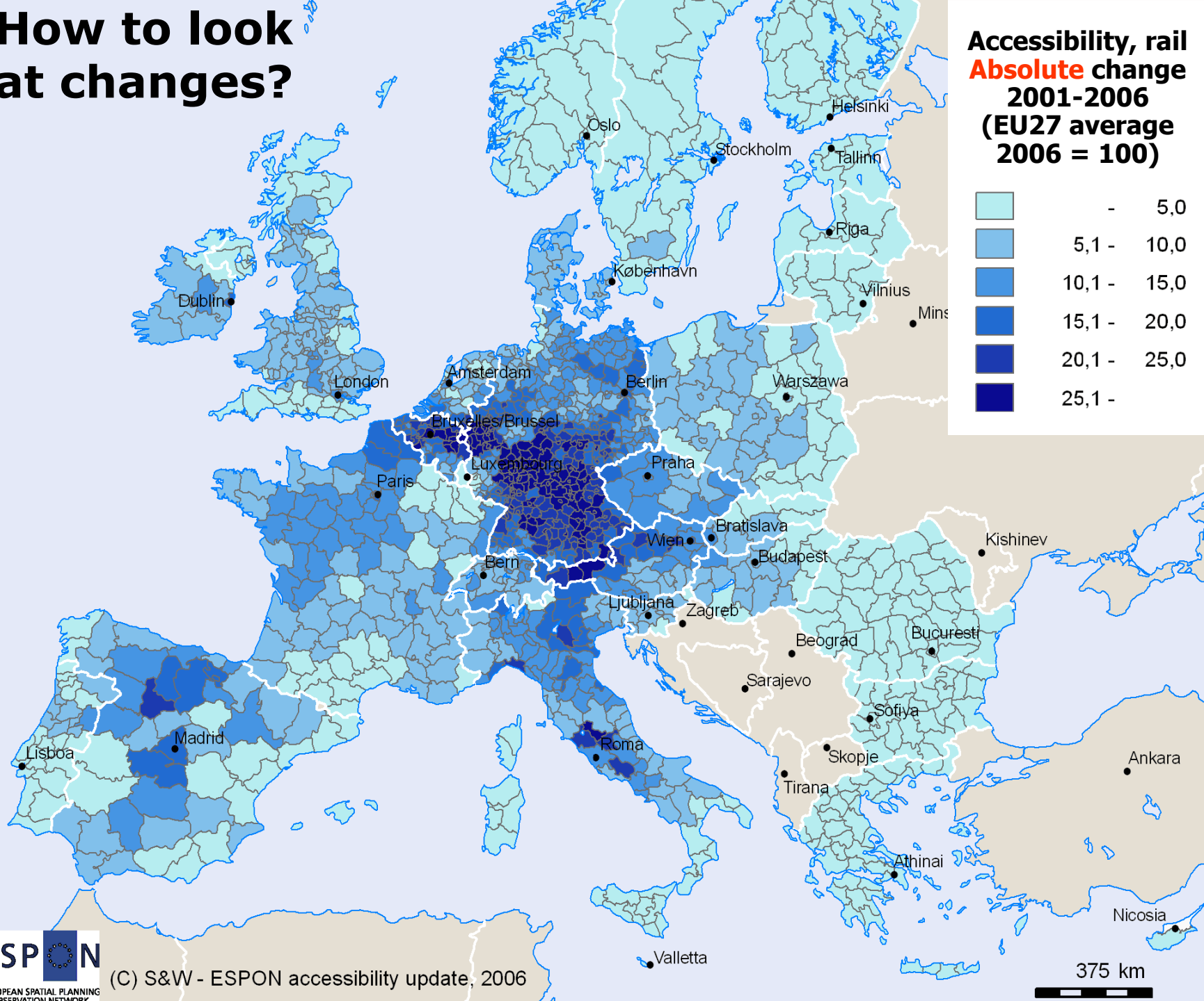
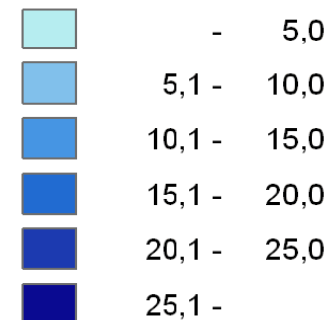


How to look at changes?

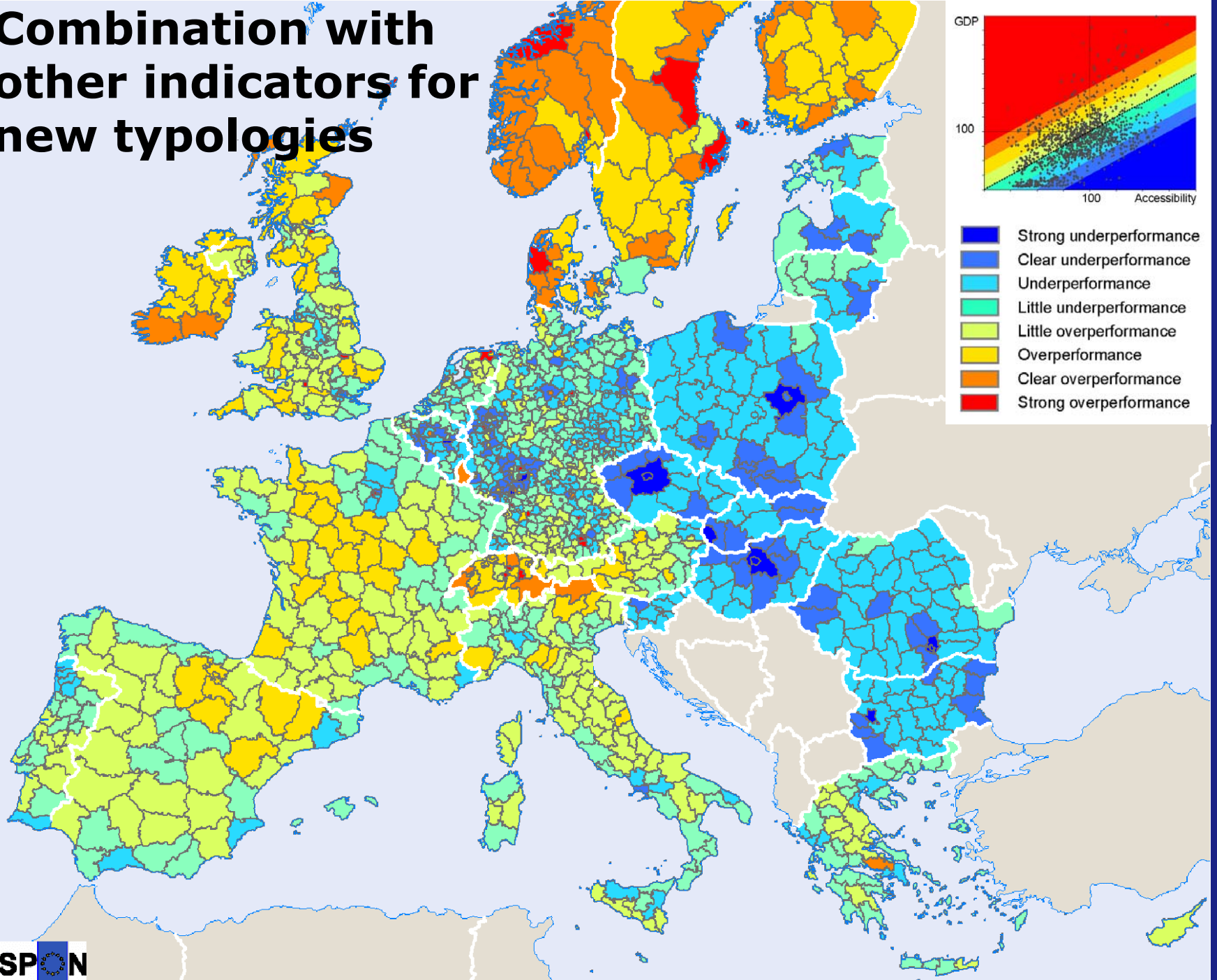


How to look at changes?

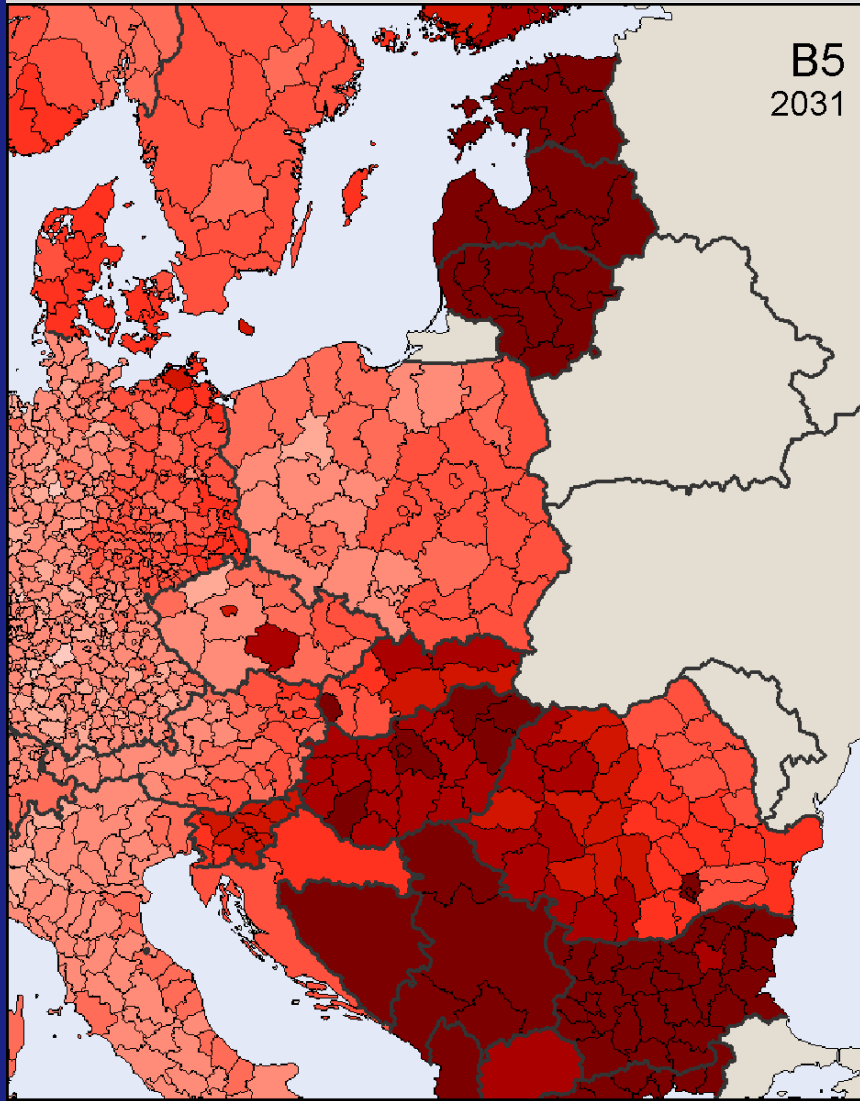
Accessibility, rail
Absolute change
2001-2006
(EU27 average
2006 = 100)



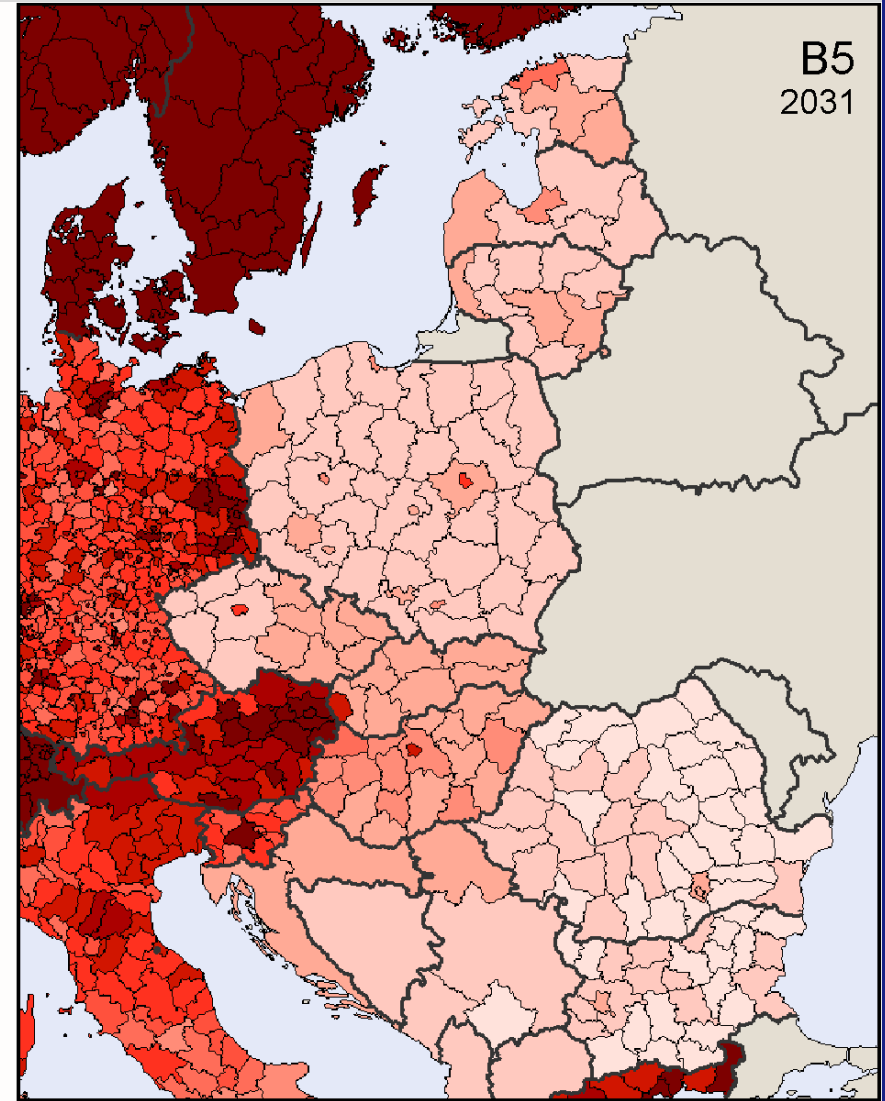
Combination with other indicators for new typologies



Forecast of regional economic impacts and territorial cohesion effects of changing accessibility



Relative GDP effects



Absolute GDP effects

Three points of advice for the future

- Standardisation/harmonisation plus plurality/innovation
- TIA methodologies: models forecasting changing accessibility and impacts on regional development and territorial cohesion
- Methodologies to measure territorial cohesion