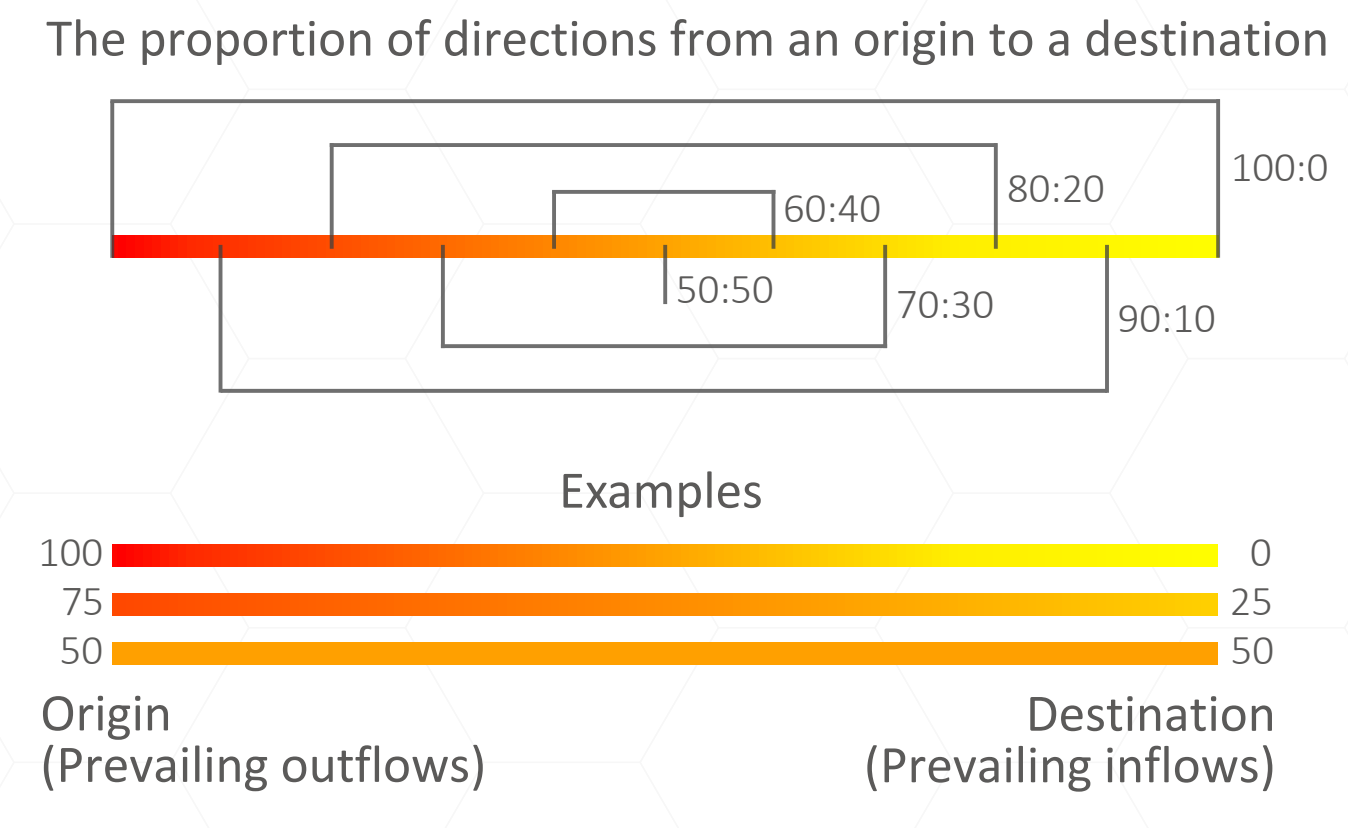


# POPULATION MOVEMENTS BASED ON MOBILE PHONE LOCATION DATA

## THE CZECH REPUBLIC

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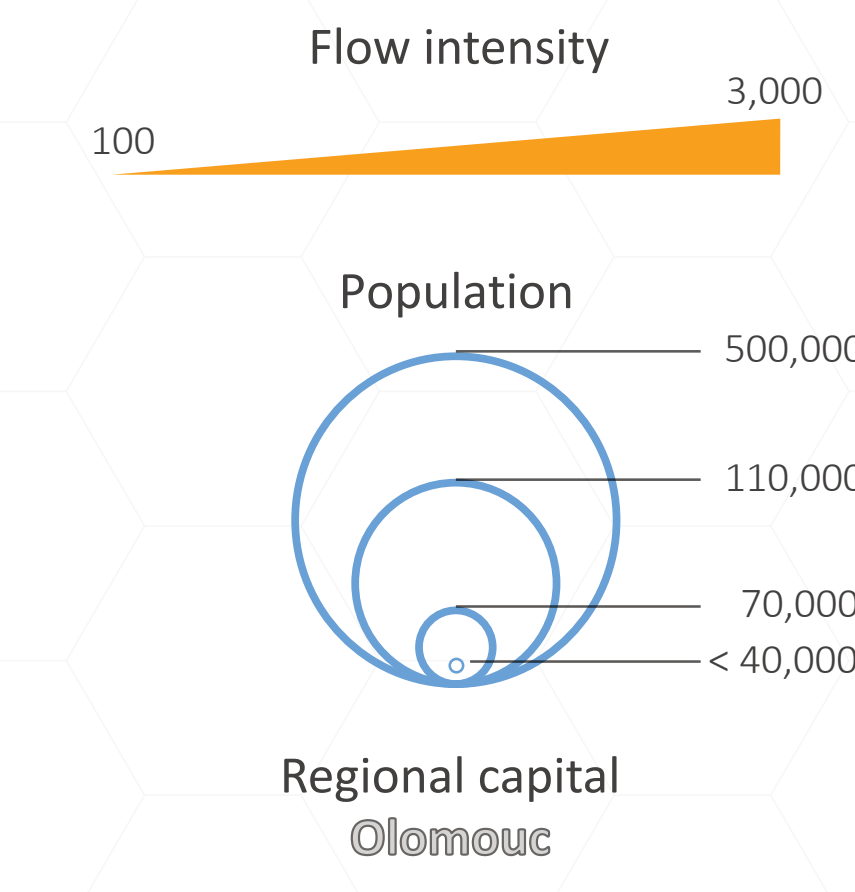
Regular daily movements  
 September 16 – October 13, 2019



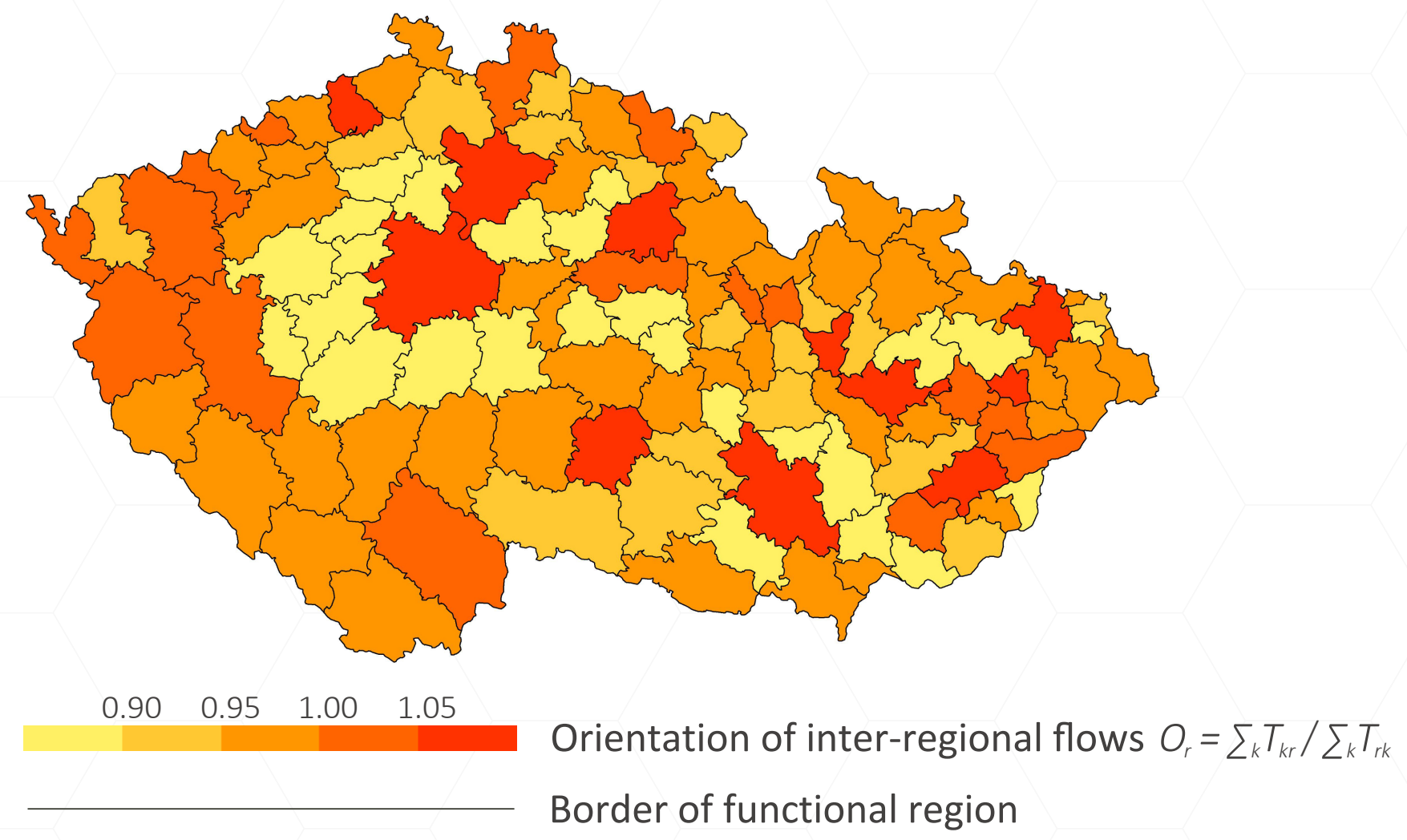
Lines show the length, intensity and orientation of flows between basic spatial units (BSUs). Orientation is expressed as the ratio between  $i \rightarrow j$  and  $j \rightarrow i$  flows ( $i, j$  are BSUs) through colour transition. The colour transitions vary smoothly from the range of red–yellow for the proportion 100:0 to the range of orange–orange for the proportion 50:50. The legend with colour transitions applies to all maps depicting flows as lines.

Choropleth maps show the proportions of ingoing and outgoing regular daily flows to/from functional regions (FRs). When ingoing flows prevail, the proportion is  $> 1$ , when outgoing flows prevail, the proportion is  $< 1$ .

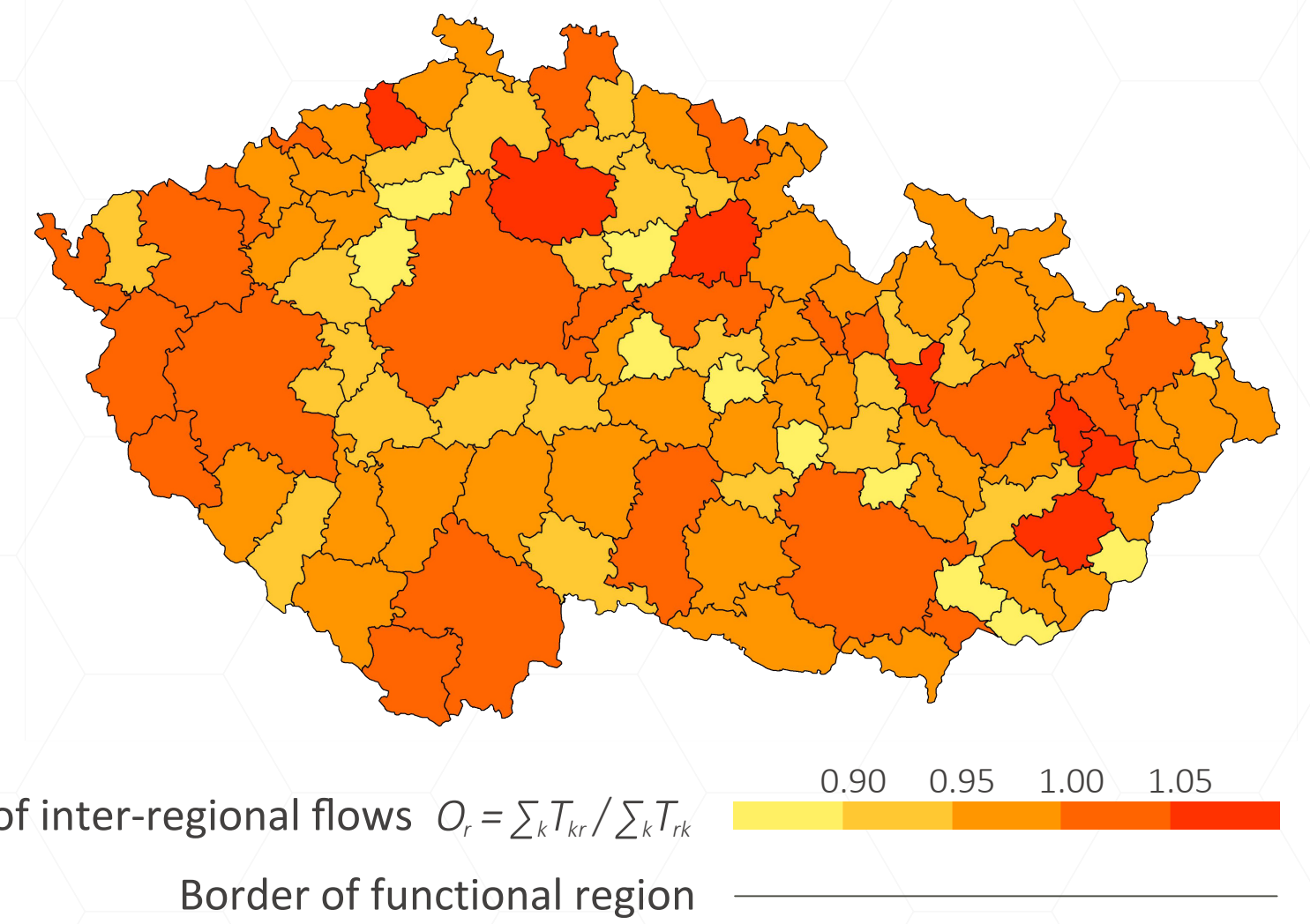
- Equation notes
- $T_{ij}$  Flow from BSU  $i$  to BSU  $j$
  - $T'_{ij}$  Transformed flow from BSU  $i$  to BSU  $j$
  - $\sum_i T_{ik}$  All flows from BSU  $i$  including the inner flow  $T_{ii}$
  - $\sum_k T_{ki}$  All flows to BSU  $i$  including the inner flow  $T_{ii}$
  - $\sum_i T_{ij}$  All flows from BSU  $j$  including the inner flow  $T_{jj}$
  - $\sum_k T_{kj}$  All flows to BSU  $j$  including the inner flow  $T_{jj}$
  - $\sum_i T_{ir}$  All flows from FR  $r$  including the inner flow  $T_{rr}$
  - $\sum_k T_{kr}$  All flows to FR  $r$  including the inner flow  $T_{rr}$



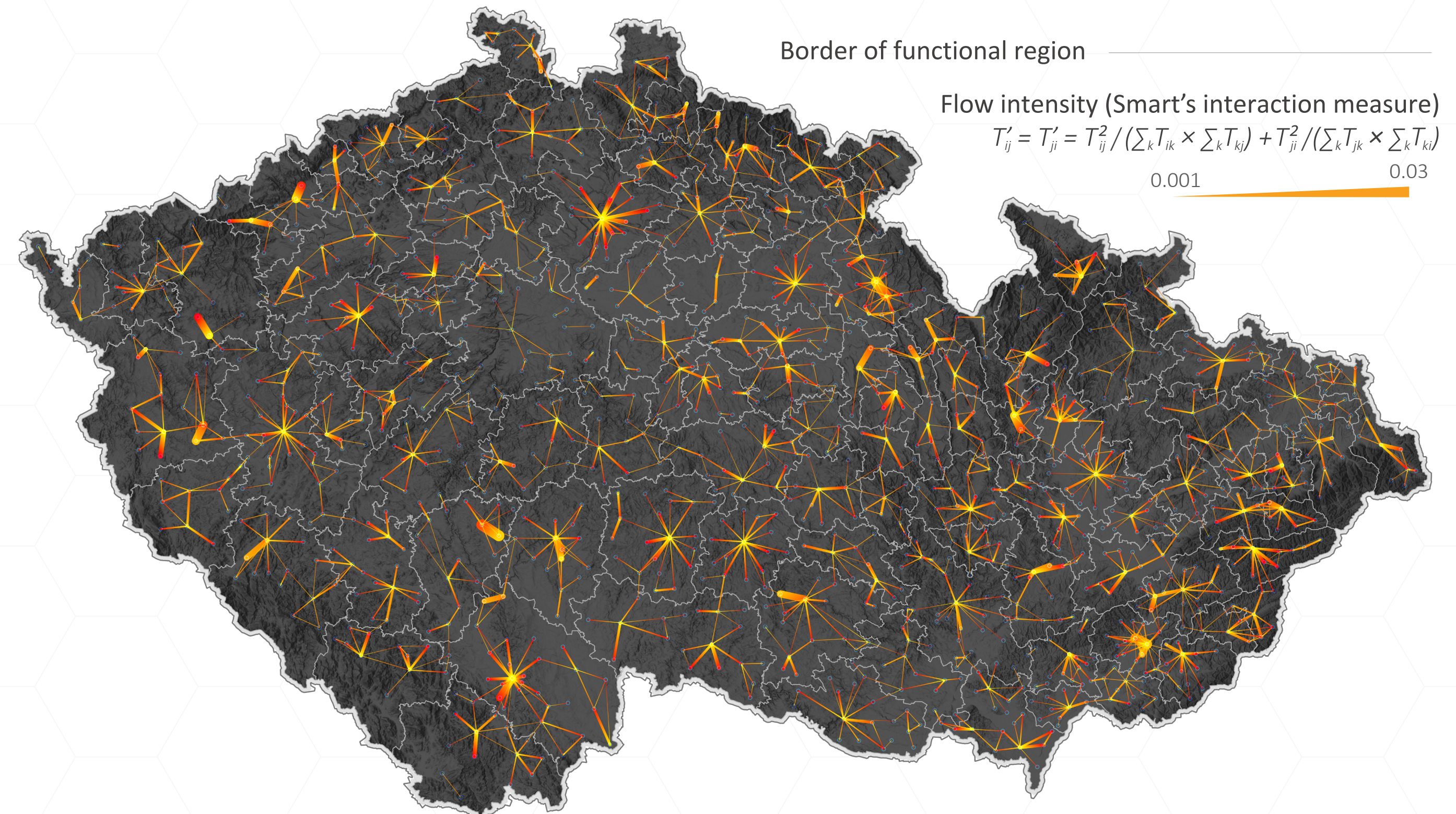
Functional regions based on Smart's interaction measure  
 Regular daily movements



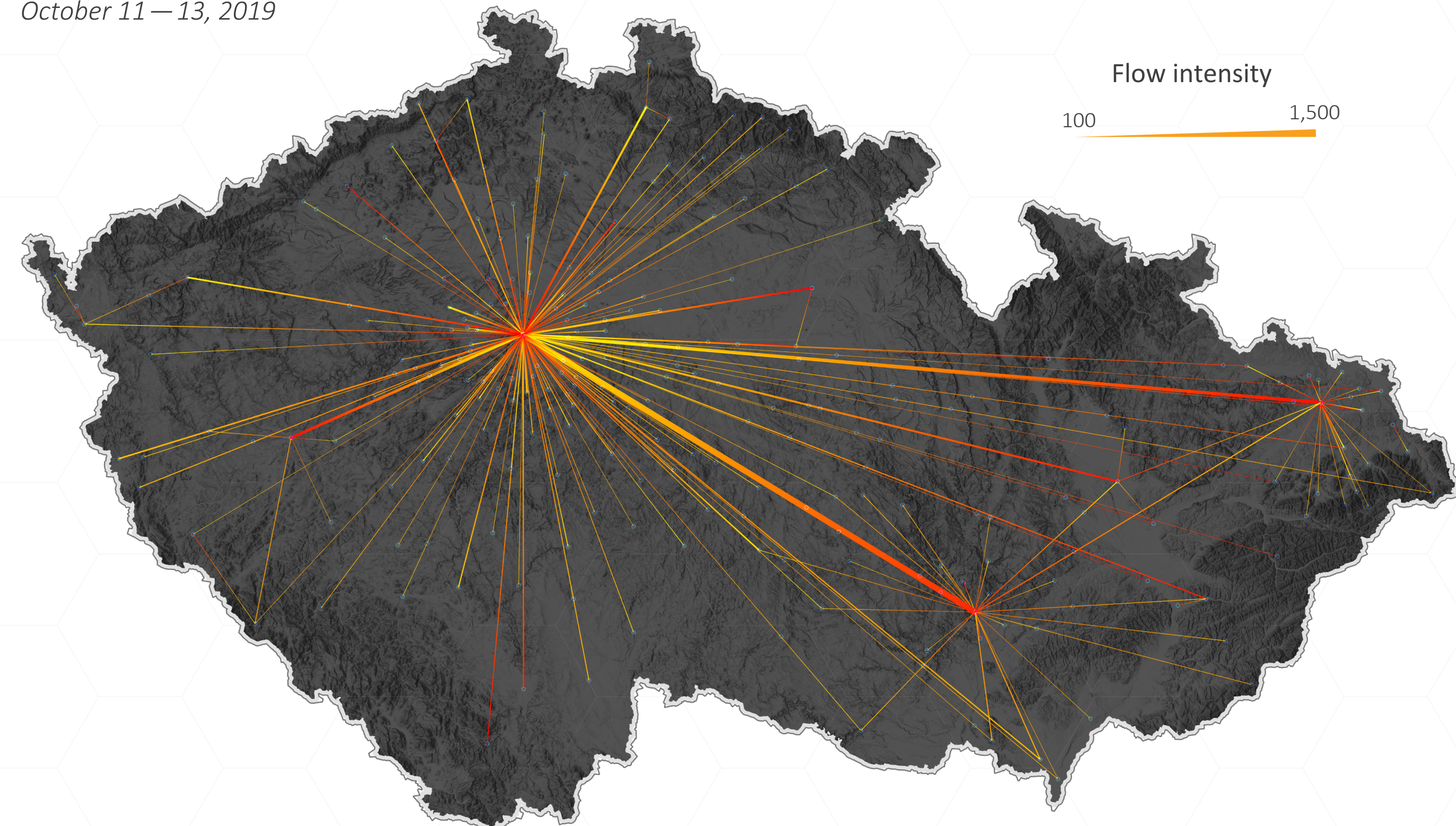
Functional regions based on the additive interaction measure  
 Regular daily movements



Regular daily movements based on Smart's interaction measure



Weekend movements  
 October 11 – 13, 2019



Regular daily movements based on the additive interaction measure

