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# A MULTILAYER VISION OF REGIONAL INTEGRATION

ESPON IRiE - Interregional Relations in Europe

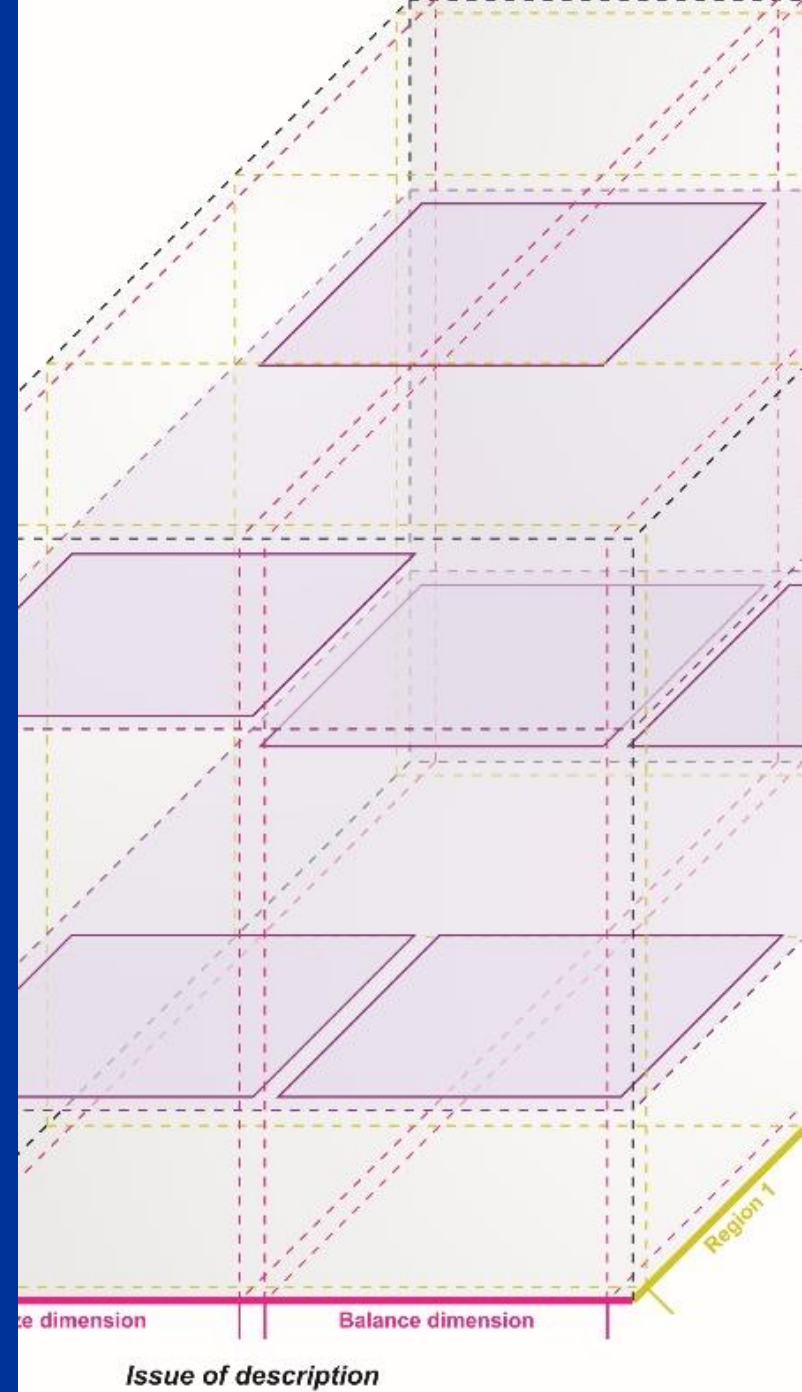
ESPON IRiE Final Event "Places Resilient to Crises"  
24th - 25th November 2022 // Baluarte Palacio de Congressos, Pamplona (NAVARRA)

# Agenda

1. Synthetic analysis –methodology
2. Results – core and peripheries
3. Results – vulnerability
4. Result – distance
5. Results - dynamics
6. Flows and European integration

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# METHODOLOGY



# Added Value of the synthetic approach

- Assessment of the general position of regions in the space of flows
- New (alternative?) picture of the European territorial differences
- Ability to compare the territorial pattern of different flows
- Opportunity to assess regions' exposure to external risks
- Possibility to compare the dynamics of different types of flows
- Basis for the new generation of territorial policies?

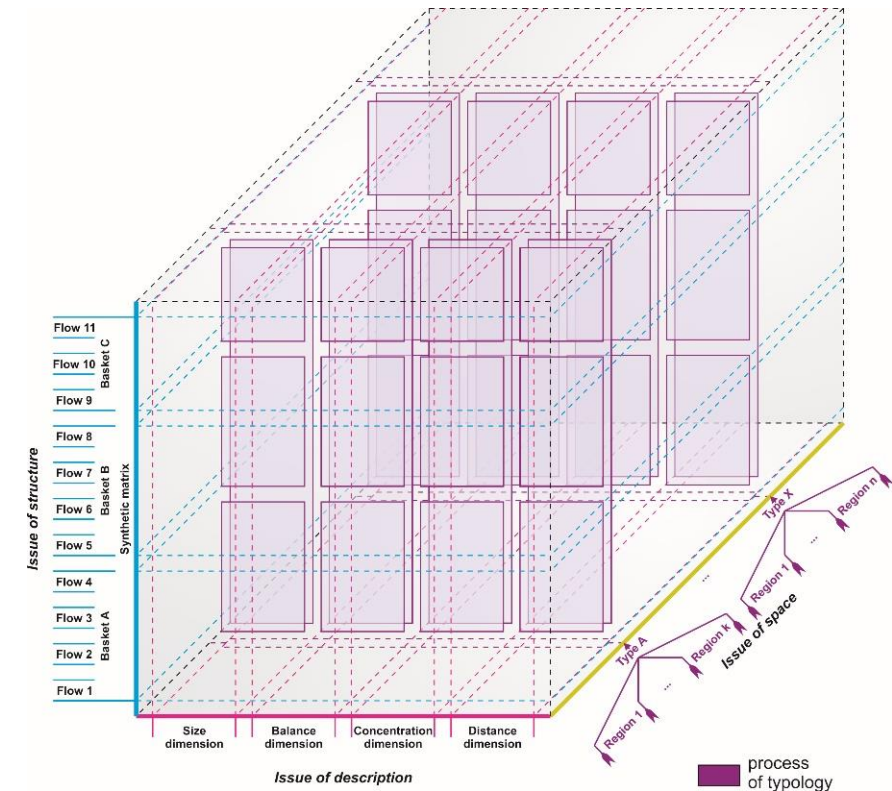
# Dimensions of the synthetic flows analysis

## Flows and their aggregations (baskets):

- **Basket Goods/services/capital**
  - Goods\_trade\_total (2010-2018)
  - Goods\_freight\_total (2010-2018)
  - Services\_total (2010-2018)
  - Capital\_FDI (2010-2018)
- **Basket People**
  - People\_Airpassengers (2010-2018)
  - People\_Migration (2010-2018)
  - People\_Commuting (2010-2018)
  - People\_Tourism (2010-2018)
- **Basket Knowledge**
  - Knowledge\_H2020 (2015-2018)
  - Knowledge\_Patents (2010-2018)
  - Knowledge\_Erasmus (2010-2014)

## Flow unrelated aggregations of regions (typologies):

- **EU accession** grouping including:
  - (1a) Old EU (up to 1995)
  - (1b) Enlargement (2004-2017)
  - (1c) Non EU
- **Cohesion** grouping:
  - (2a) more developed
  - (2b) transition
  - (3) less developed
- **Macroregional** grouping:
  - (3a) Baltic Sea;
  - (3b) Danube;
  - (3c) Alpine;
  - (3d) Adriatic-Ionian
- **Urban dominance**:
  - (4a) very high;
  - (4b) high;
  - (4c) moderate;
  - (4d) low



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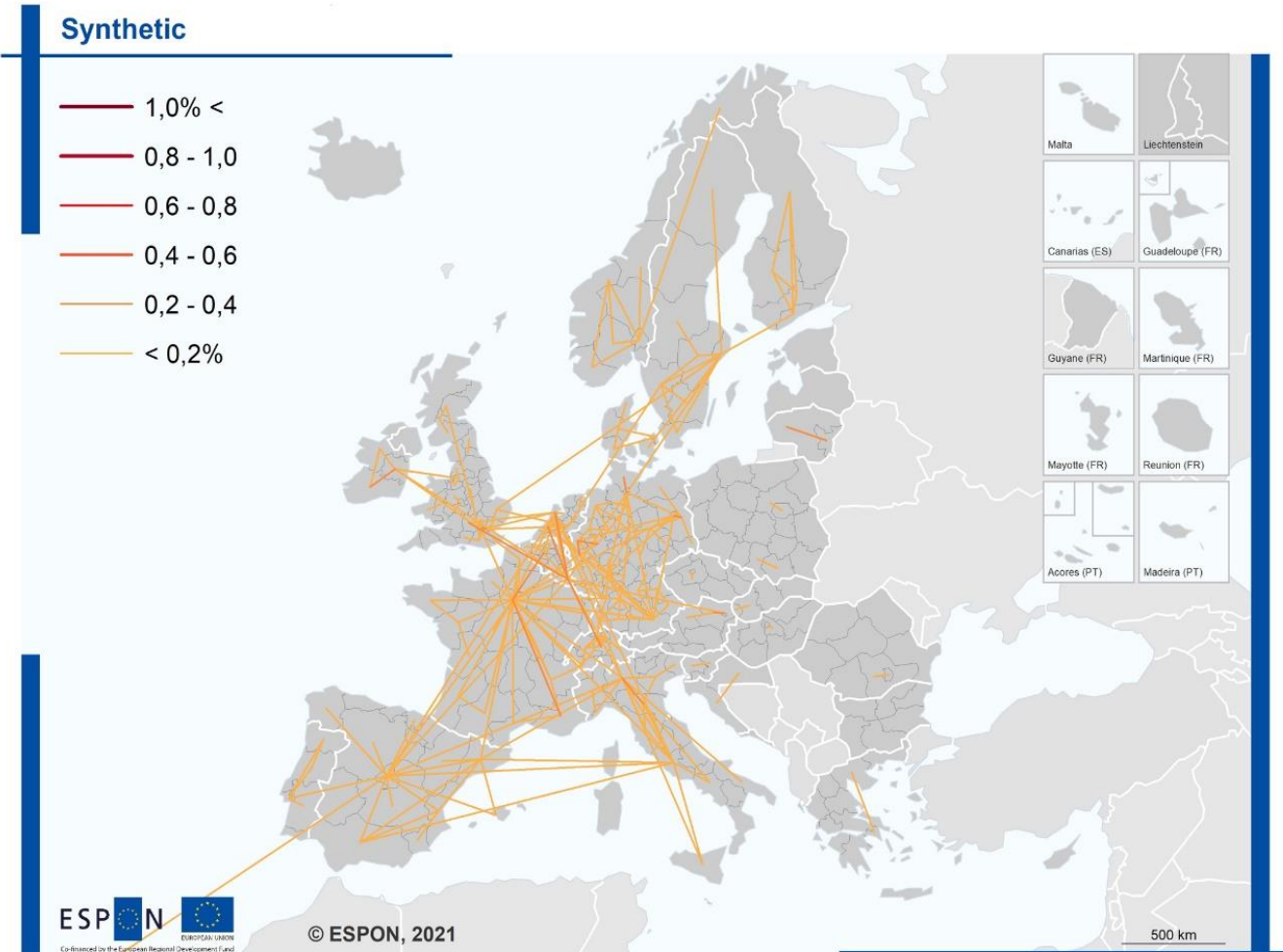
# CORE AND PERIPHERIES





# Strongest relations

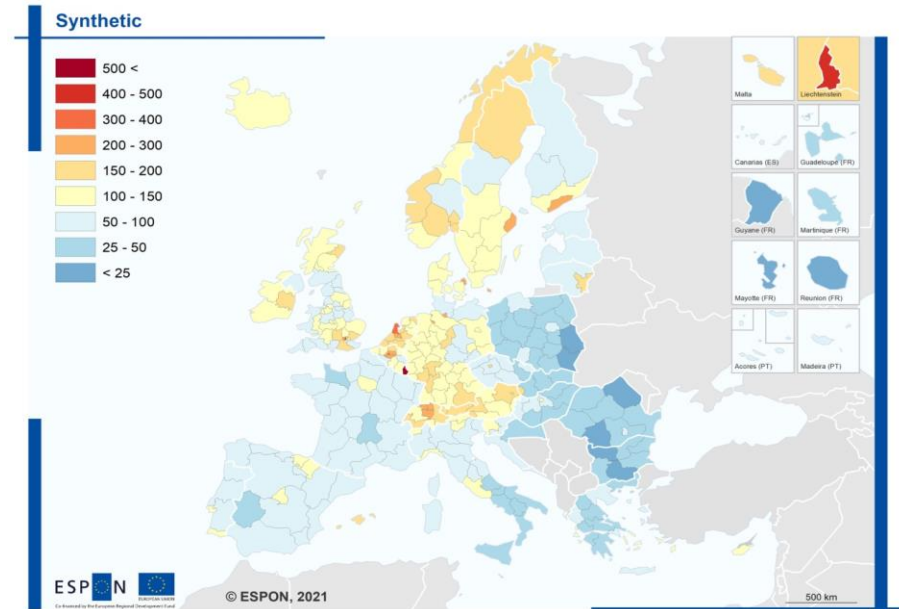
- Linkages between the capitals of Western European countries.
- Dense network of relations between the EU „old member states“ and relatively weak between new EU countries (2004, 2007 and 2013 enlargements) and Greece
- Dynamic development of **local flows**
- The **historical** factor still matters
- **Nodes** that concentrate the strongest flows: London, Paris, Luxembourg, Amsterdam, Frankfurt, Munich, Hamburg, Berlin, Madrid, Rome, Milan, and Stockholm.



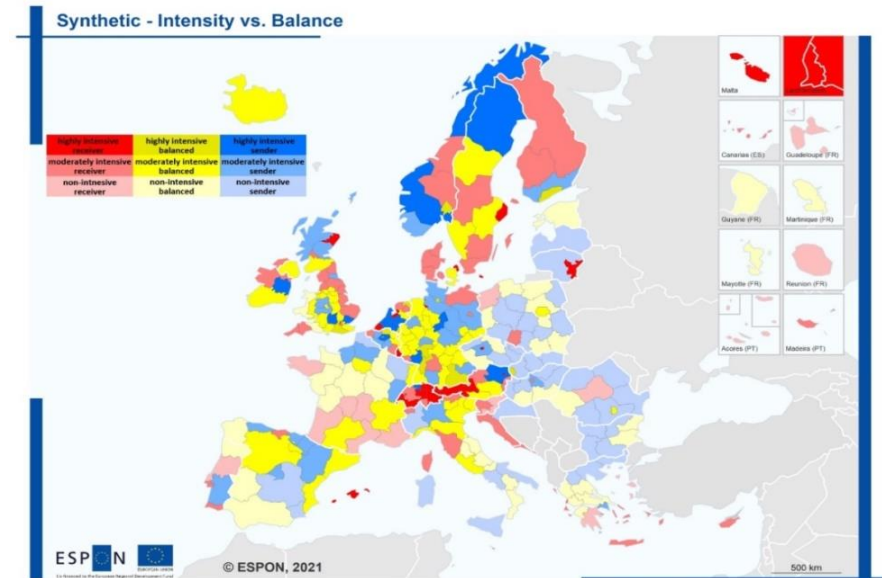
Regional level: NUTS 2 (2016)  
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# New picture of the core – periphery patterns

- Core of Europe is moving **north**
- Two systems core-periphery **overlap**
- Flow intensity decreases outside the core
- The **historical** factor still matters
- Balance determines the European core-periphery pattern?
- Knowledge flows – **different pattern** (ERASMUS)



Regional level: NUTS 2 (2016)  
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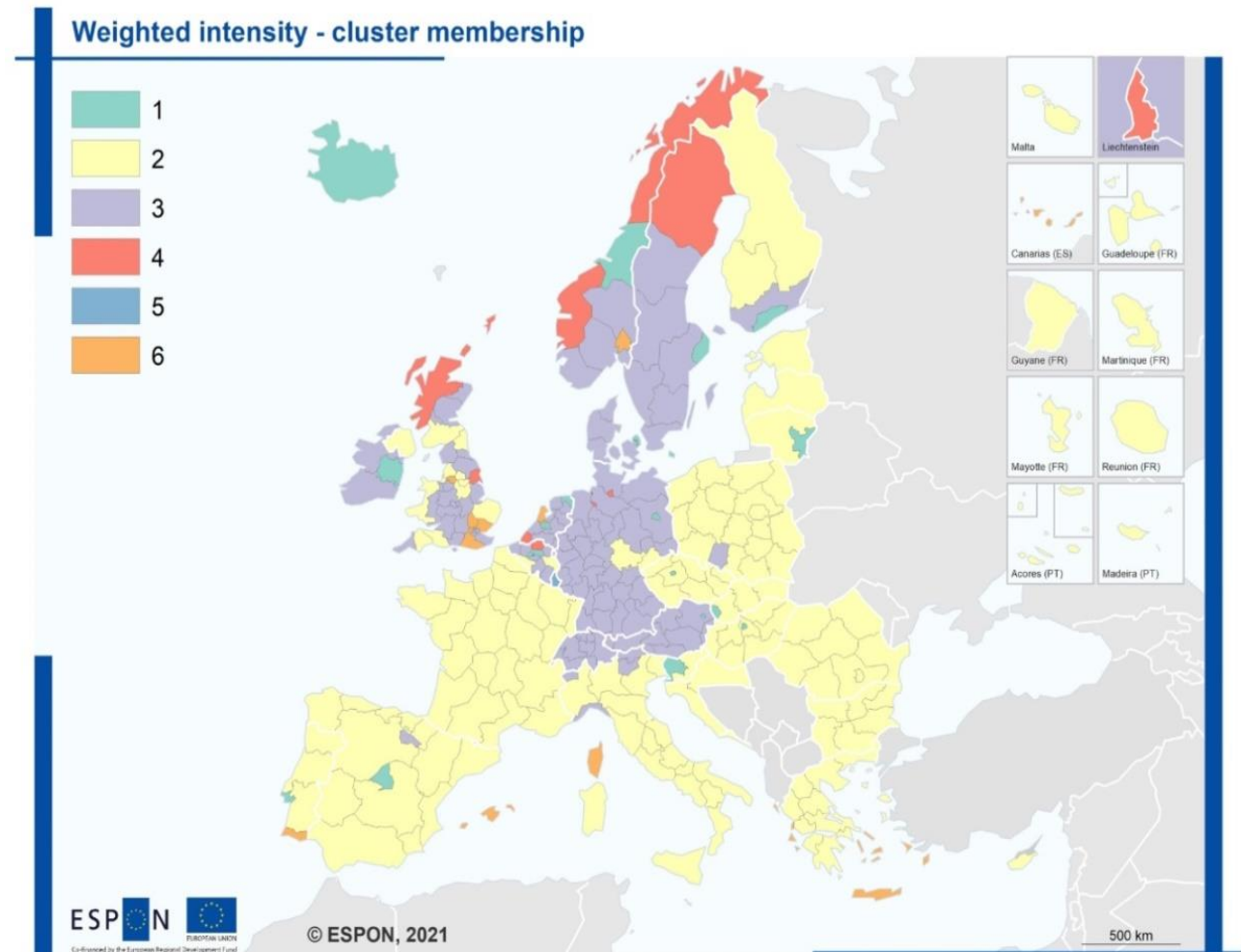


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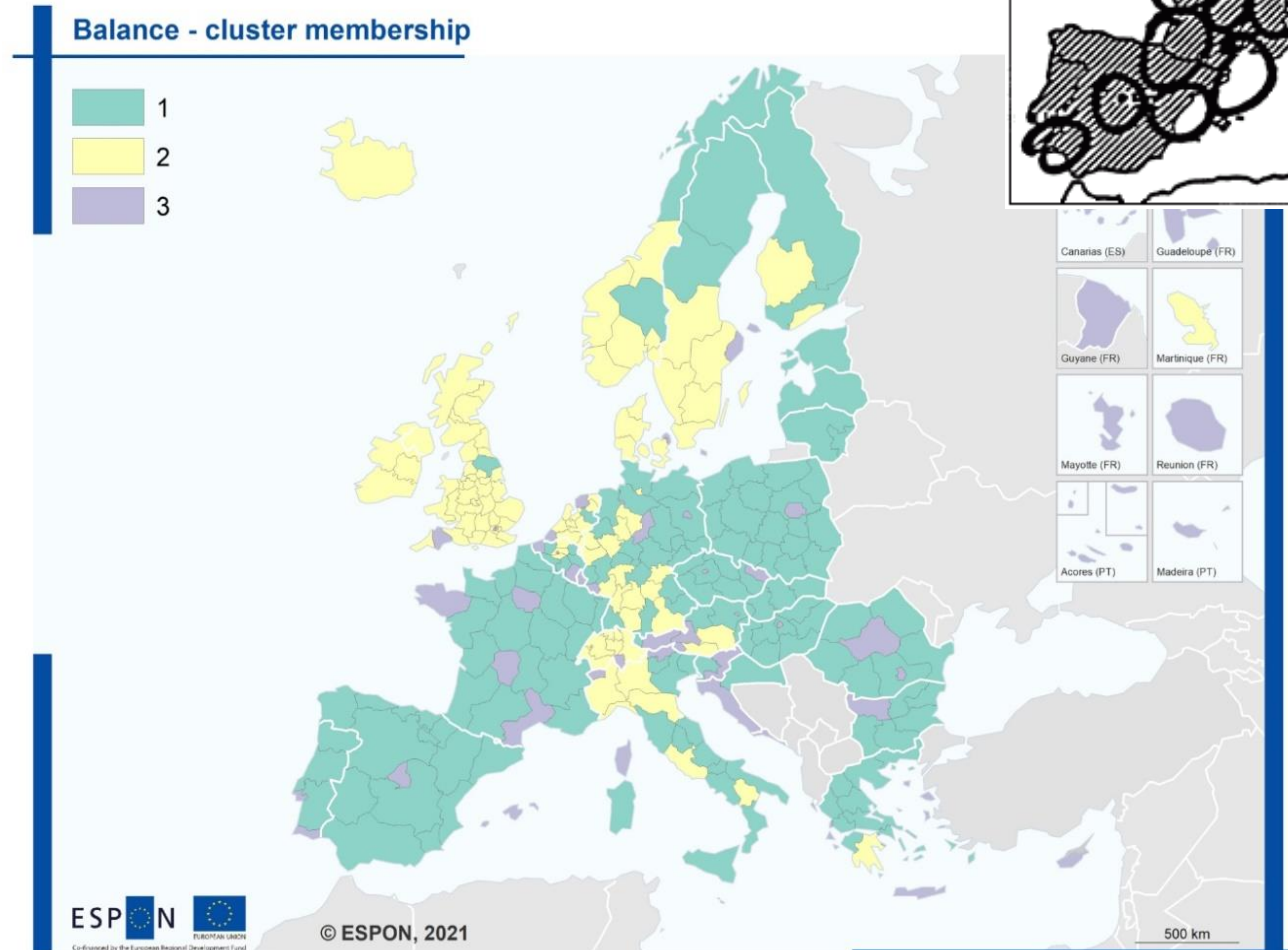
# New picture of the core – periphery patterns (clustering)

- Cluster 1 **capital city regions**
- Cluster 2 most of the **core and peripheral regions of southern and central-eastern Europe.**
- Cluster 3 the **core of the European space of flows.**
- Cluster 4 includes **port city regions**
- Cluster 5 is **Luxembourg** (FDI capital flows)
- Cluster 6 is dominated by **regions with strong air passengers and tourism flows**



# Gateway regions and polycentric Europe

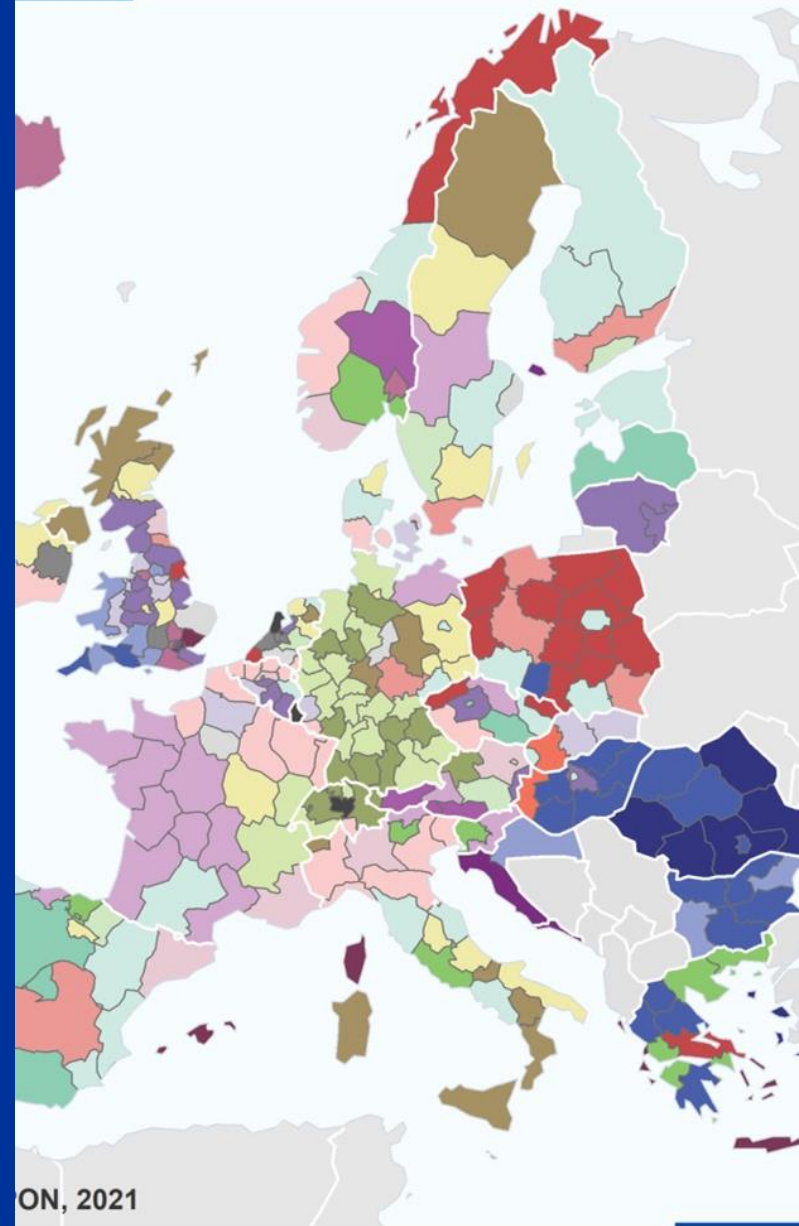
- „Islands” of higher flows intensity
- The special role of peripheral **metropolises**
- „Gateway cities” link their countries to European space of flows.
- Gradual polycentric development of Europe outlined in **1991 by Kunzmann and Wegener** and in the ESPDP



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# VULNERABILITY

Efficient of variation

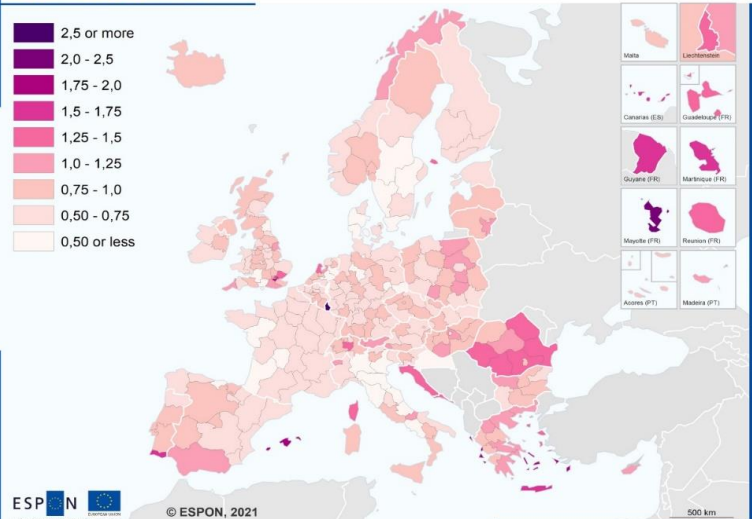




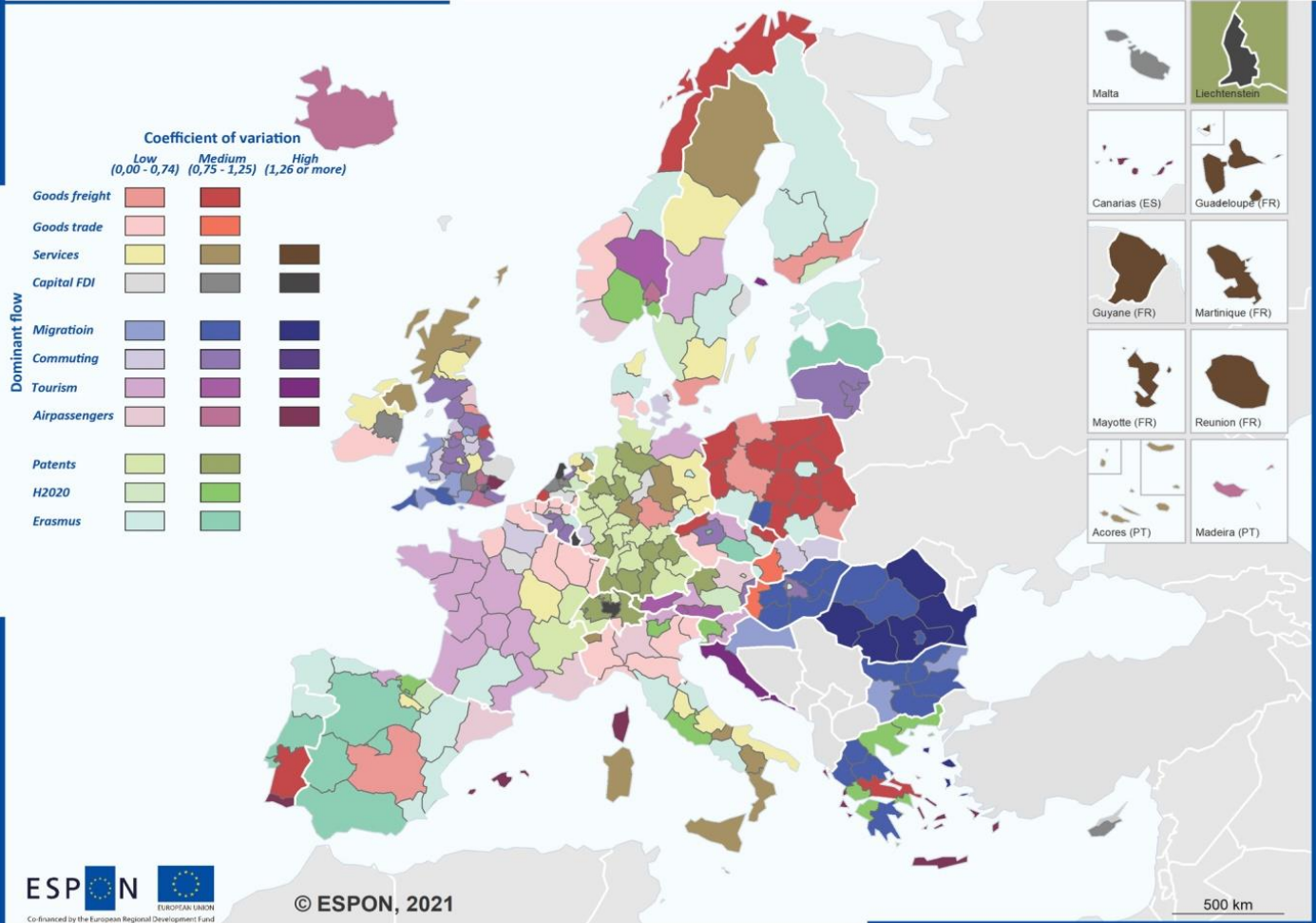
# as the measure of vulnerability

- The **level of exposure** depend on the diversity of external relations.
- Regions that have a balanced composition of flows, might expose less to **external shocks** or policy decisions
- Metropolises, have a greater flows **dispersion**

Coefficient of variation



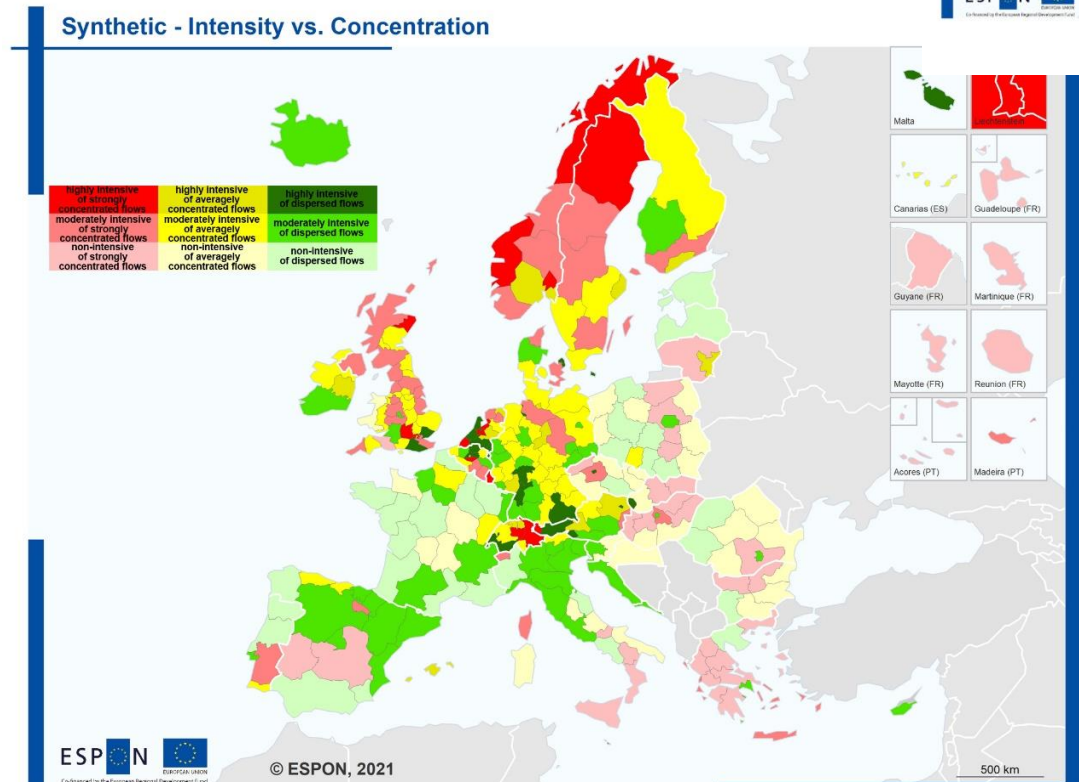
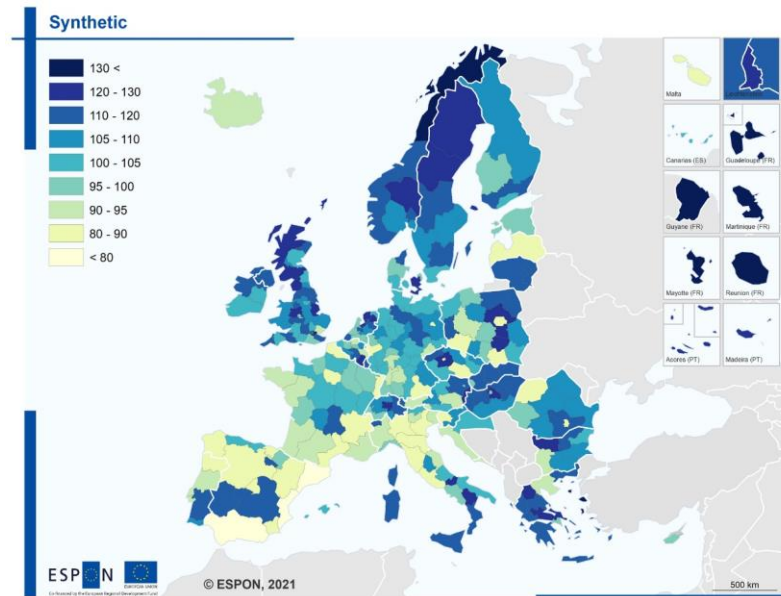
Dominant flow and coefficient of variation



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# Flows concentration as the measure of vulnerability

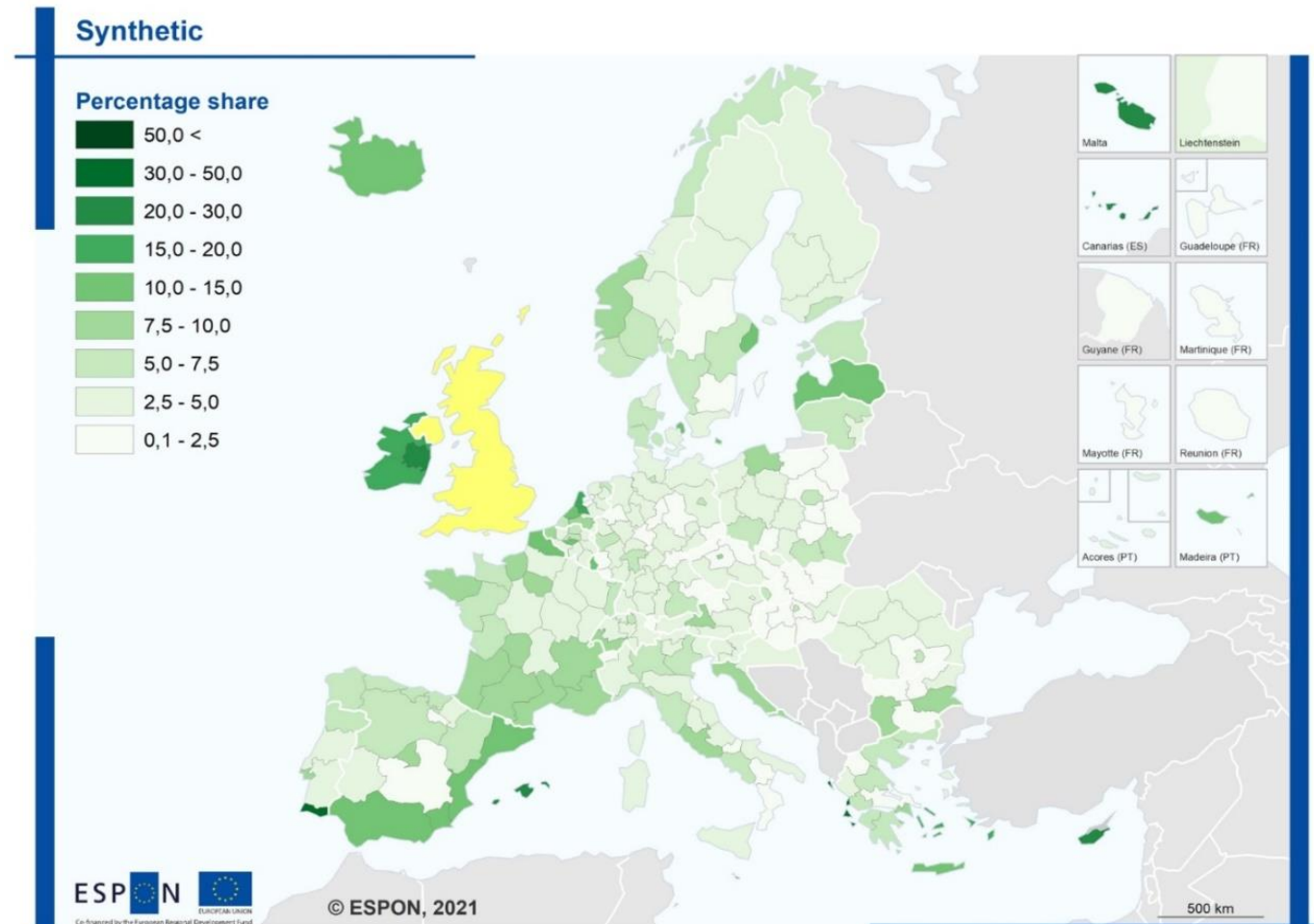
- **Geographical concentration** also creates risks
- More partners - **more resilient** region.
- **Double exposure** to external threats.
- **Public intervention** should favour the diversification of regions' external relations?





# UK dependency index

- Units with the **highest importance** of flows to and from the UK (up to 50% of all total relations) include Ireland, the Western Netherlands (with Amsterdam), the Portuguese Algarve, Malta and Cyprus.
- Metropolitan dependency.** The UK (London in particular) are key destinations for regions including many European capitals (Paris, Rome, Berlin, Stockholm, Warsaw, Madrid, Copenhagen, Bucharest)
- The index value **decreases towards the east**
- Germany as an important **„intermediate opportunity“**
- Depended **„islands“** on peripheries



Regional level: NUTS 2 (2016)  
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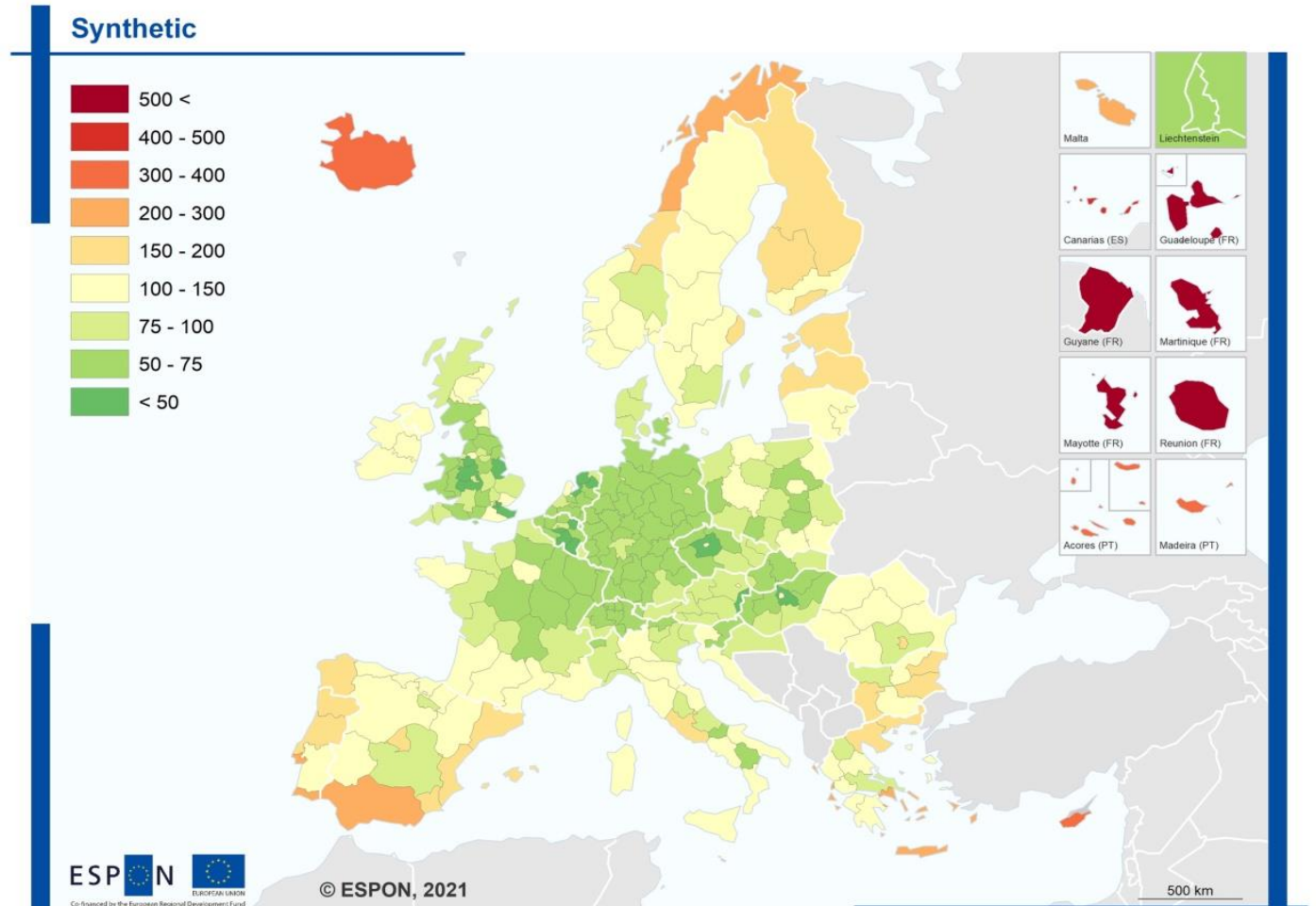
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# DISTANCE



# Changing distance friction

- **Compact core** - dominance of low-average flow distances
- Spheres **of influence** of some metropolises
- Belts with higher index values - **inner peripheries**.
- Flows in **remote regions** again depends on distance

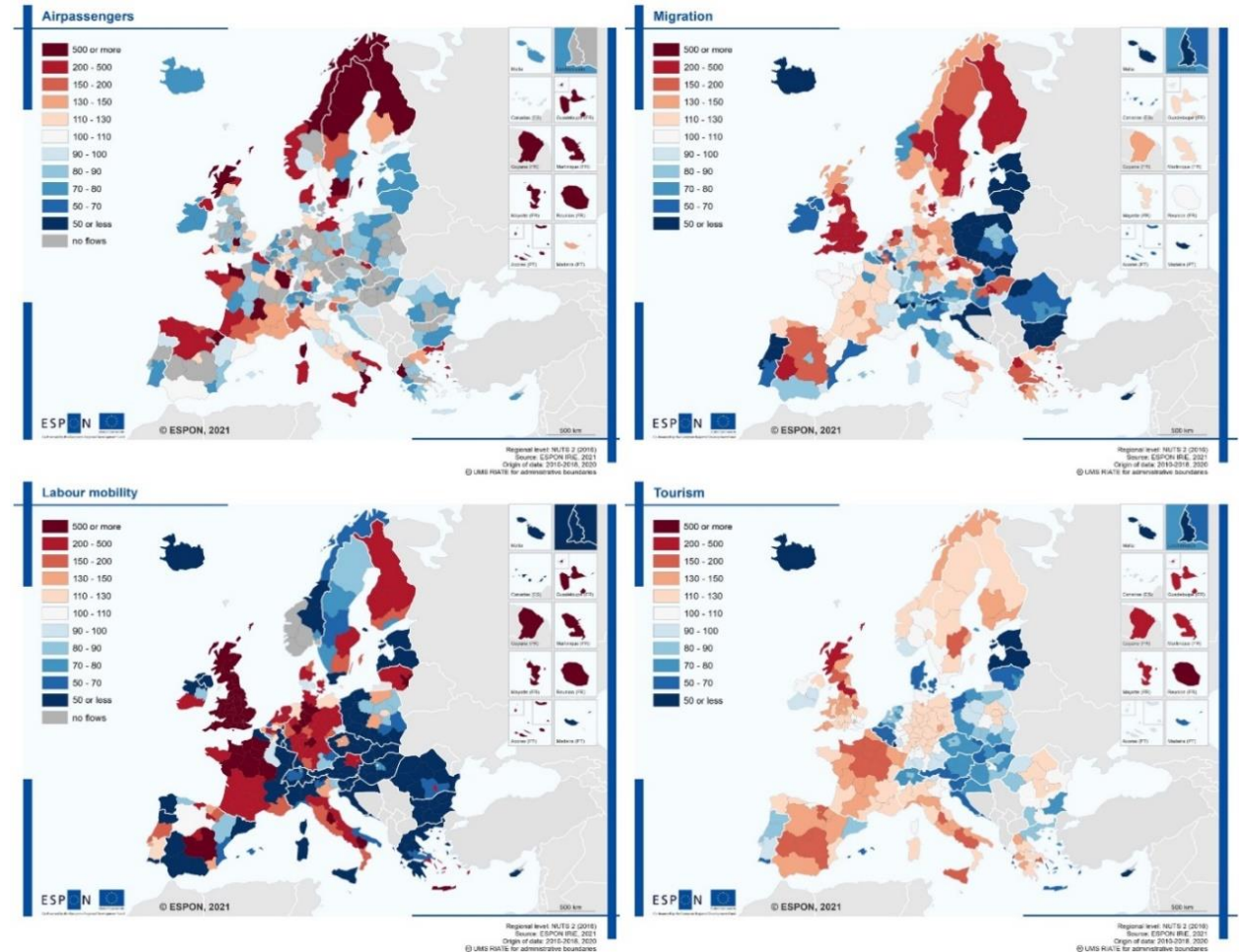


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# International versus domestic flows

- **Internal flows** are bigger
- **Competition** between foreign and domestic destinations
- **Proximity to the European core** facilitates internationalization
- Intense flows between **capital cities** and their vicinity - result of commuting and **suburbanization**.



Border effect for air passengers, migration, labour mobility, and tourism

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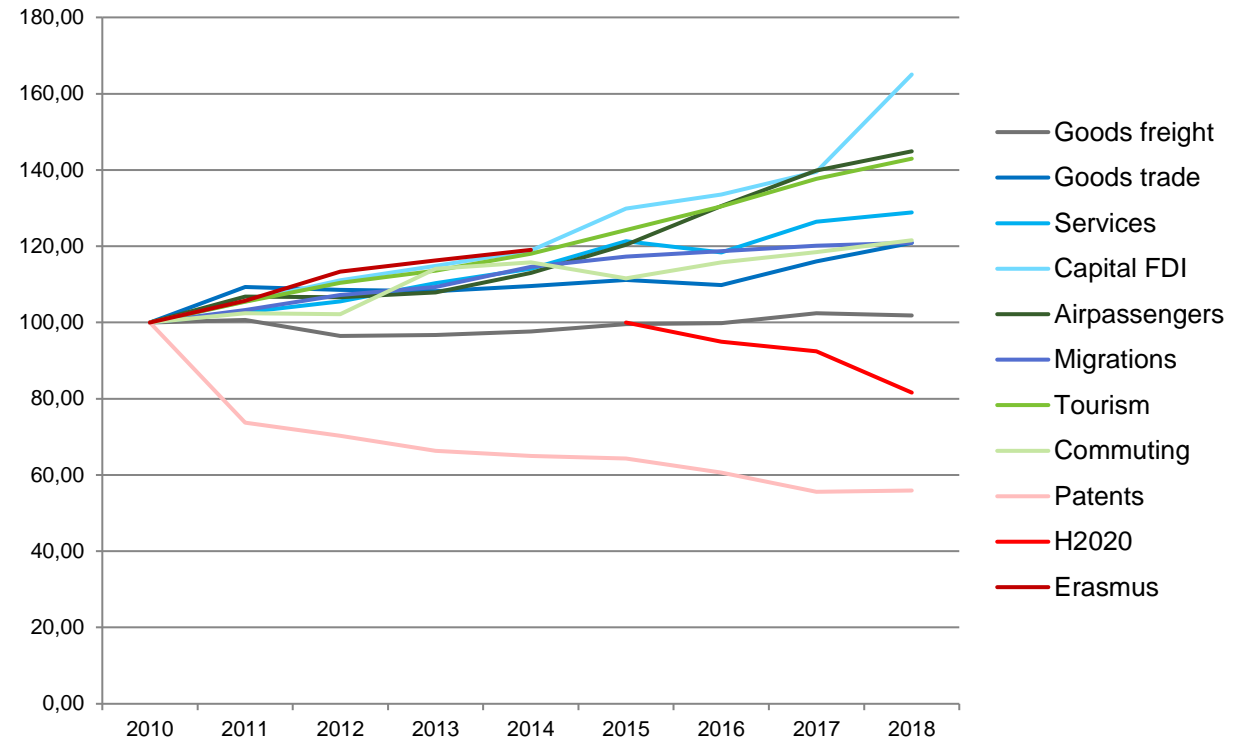
# DYNAMICS





# Flows dynamics - territorial differences

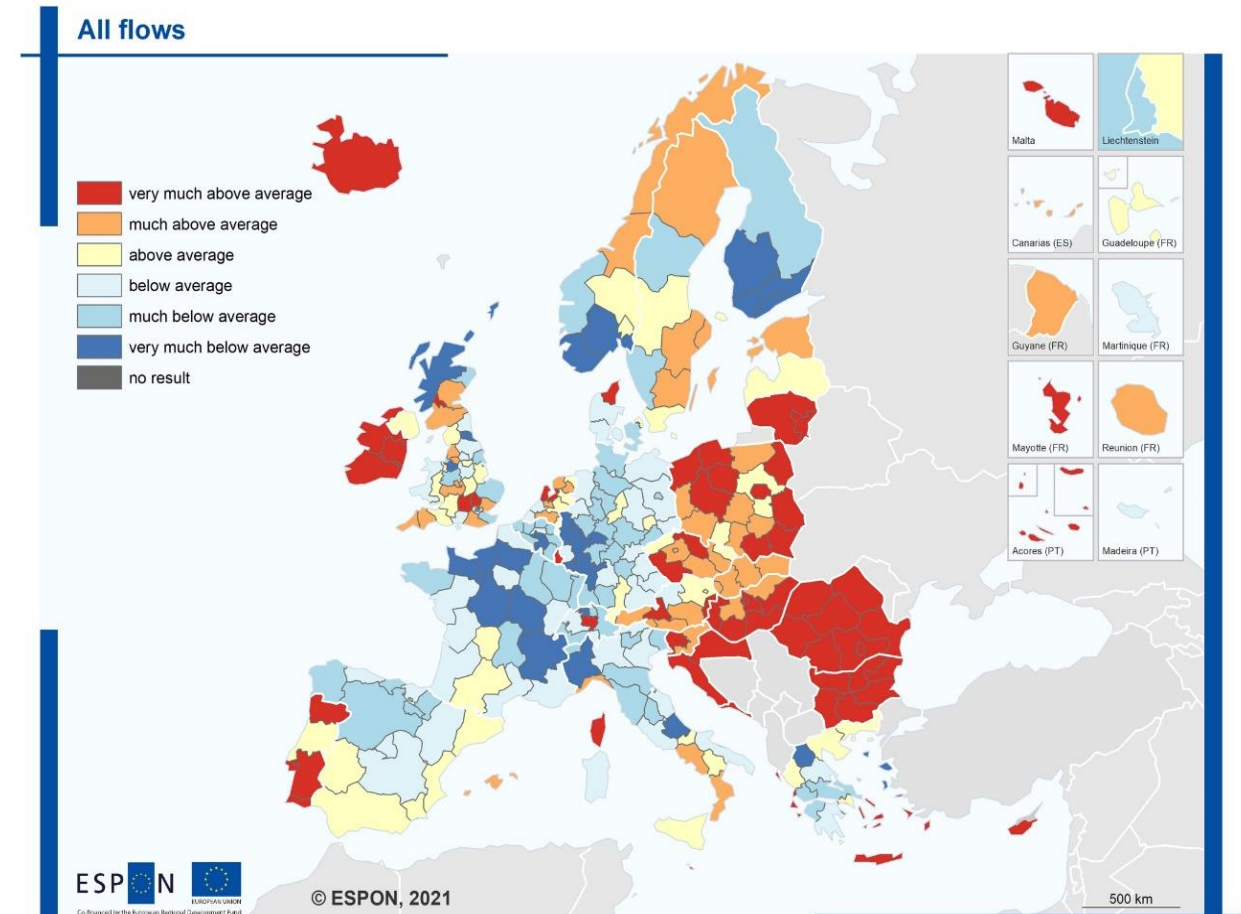
- Towards **imbalance** between financial flows and trade and social relations?
- Integration in the **R&D sector** is not keeping pace with the intensity of other flows, and thus with economic integration.
- Threat of the territorial **polarization in knowledge** under most regions' full integration into the economic system.
- Gradual **rebalancing** of the system of people flows



Dynamics of sum values for r2r matrices for 11 flows (base year of 100)

# Flows dynamics – territorial differences

- **Flows convergance** especially in the countries that joined the European Union since 2004;
- These regions have so far participated to a lesser extent in the space of flows, but are catching up quickly and are increasingly becoming networked



Regional level: NUTS 2 (2016)  
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Dynamics of region's exponential trendline of total (outflow and inflow) flow's intensity

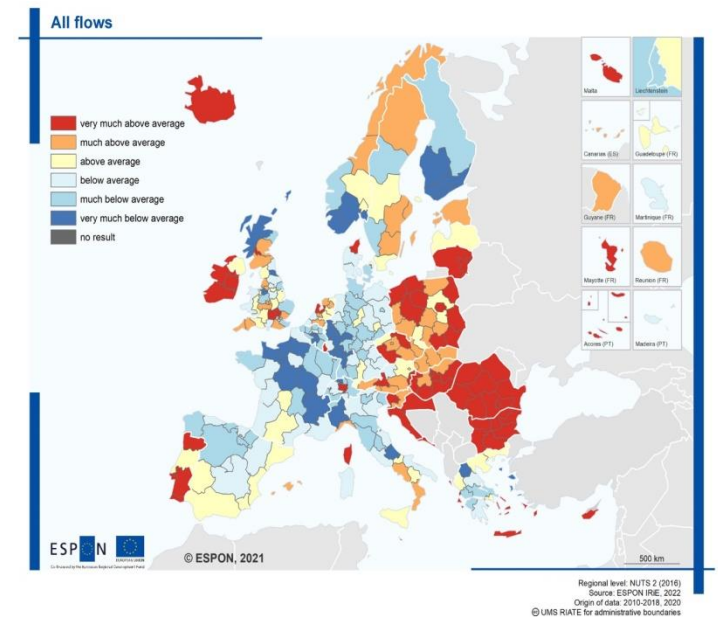
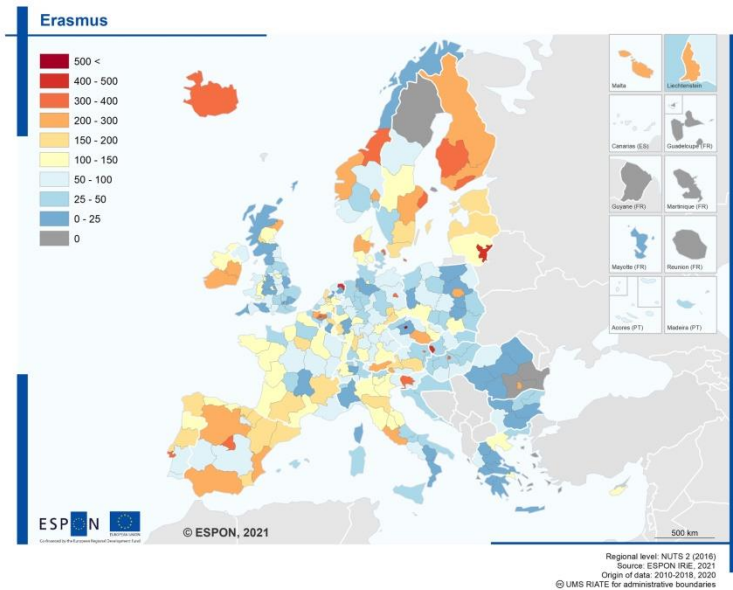
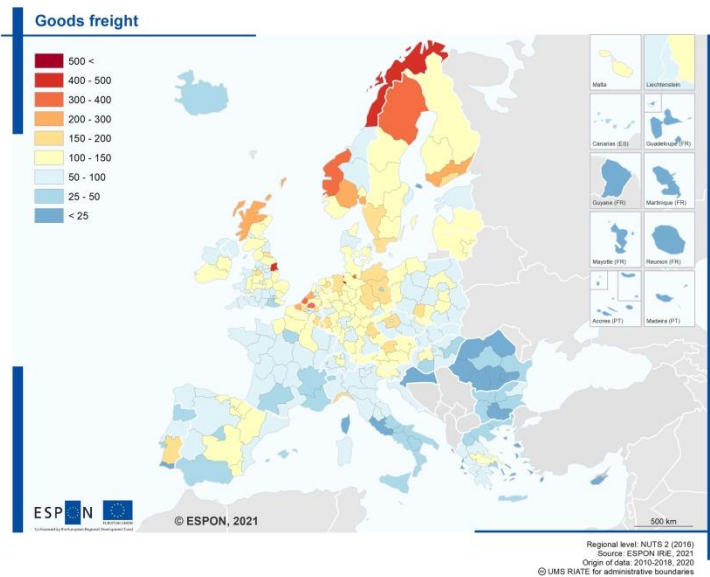
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## FLOWS AND EU INTEGRATION



# Flows and European integration

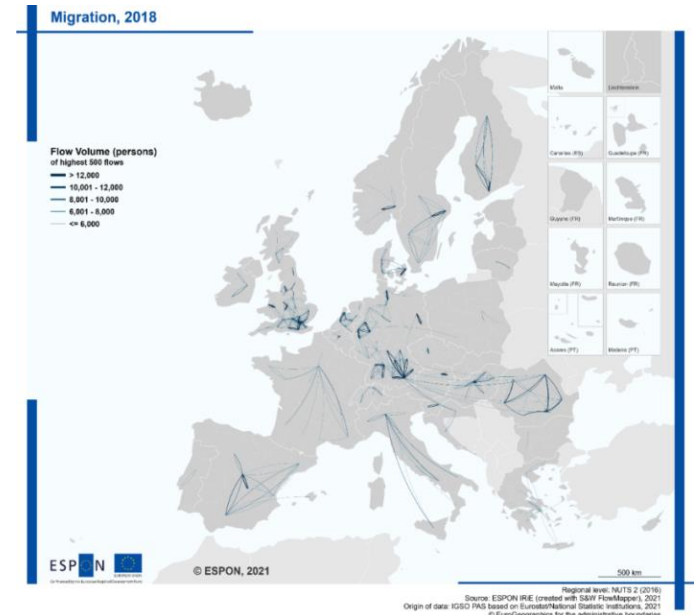
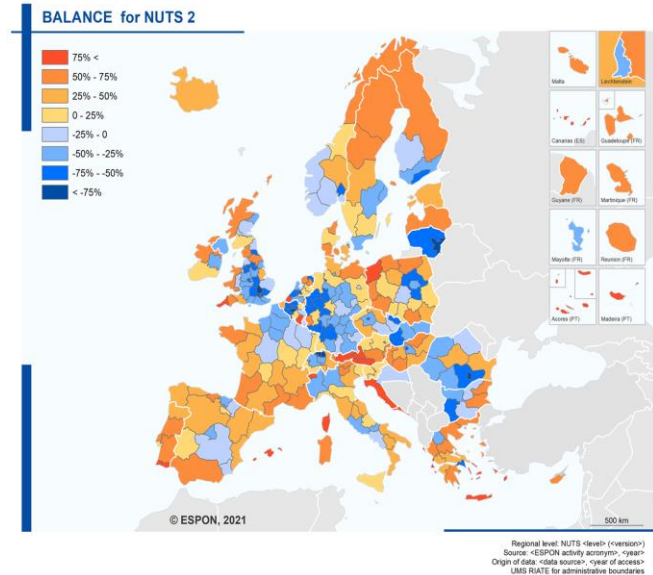
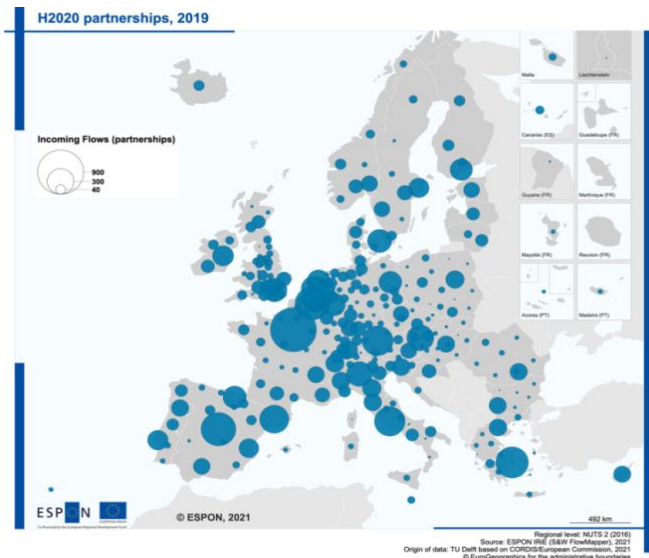
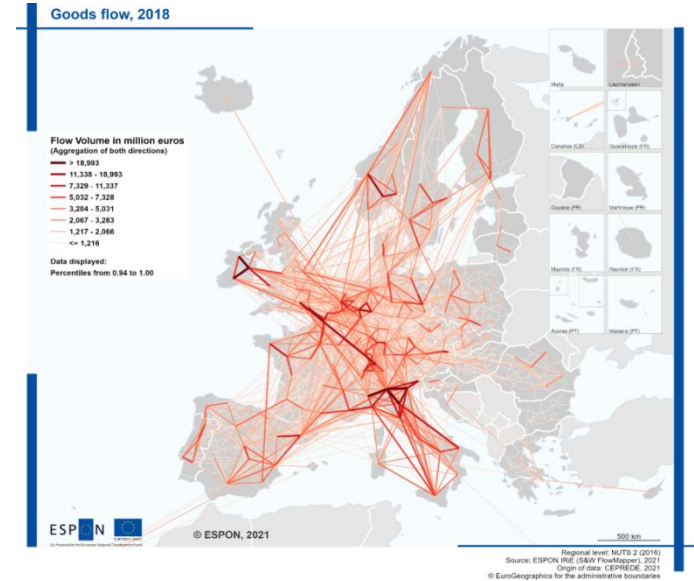
- Some results are evidence of the **success of European integration**
- This is especially true for **economic flows** (primarily trade).
- Regions in Germany, France, and Spain as well as western Poland and Czechia are similar in the structure of their flows
- Even non-metropolitan regions there participate in **Castells' "space of flows,"**
- The distribution of both **people and knowledge flows differentiates** the European space much more than that of economic flows.
- Social integration is slower** than economic one





# Flows and Territorial Agenda 2030 – Just Europe objectives

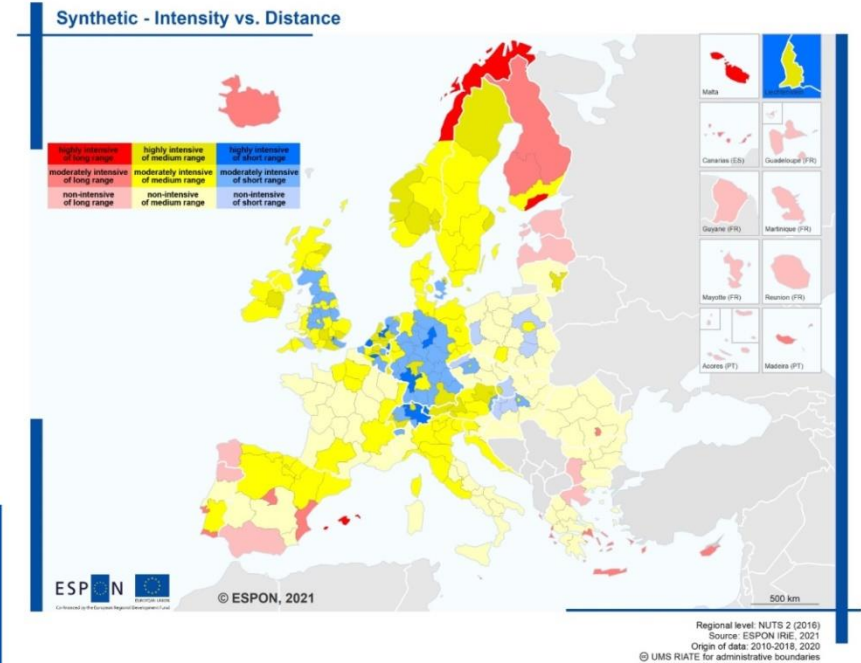
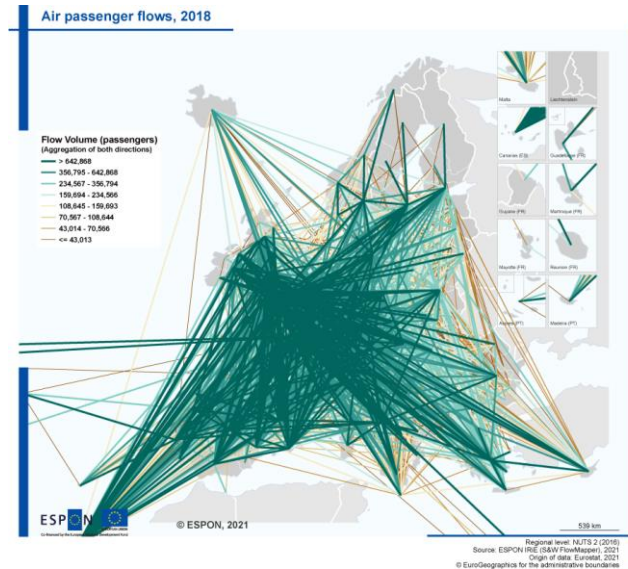
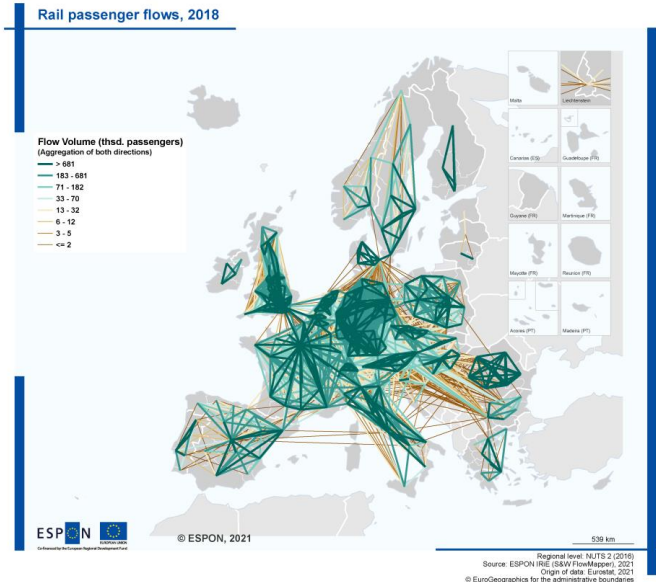
- More **balanced territorial development** of Europe (polycentric)
- Overlapping systems of flow imbalances** between European regions.
- The importance of **functional regions**
- Integration beyond borders** remains a challenge





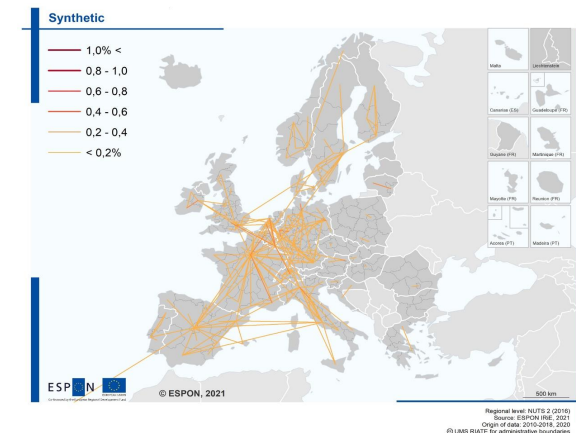
# Flows and Territorial Agenda 2030 – Green Europe objectives

- We are not moving towards **sustainable connections**
- Promoting a **Green Europe** has territorial implications
- Flow distance is not decreasing (we are not moving towards a **circular economy**)



# General conclusions / recommendations

- There are still regions in the European space where **historical factors and/or cultural specificities** may be the factors shaping their position in the space of flows.
- This can be interpreted through **path dependency theory**. Examples include countries with a colonial past (Cyprus, Malta) but also regions in CEEC (frequent changes of state affiliation - Poland, Romania).
- The new territorial evidence might help to improve the formulation of **regional development strategies**, thereby protecting the key flows, helping to create a balanced pattern of interregional relations, and minimizing strong dependencies.
- **Public intervention** should favour the diversification of regions' external relations.
- Exposure and resilience — in relation to interregional flows — are **region- and flow-specific**.
- There is **no one-size-fits-all policy** for interregional relations.
- Can the objects of cohesion policy be both the regions (nodes of relations) and the relations themselves (**pairs of regions**)?



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**Muchas gracias por su atención!**

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