

Visualisation

Breakout session – workshop 1



This project has received funding from the EU's Horizon 2020 program under grant agreement no 957026.



A journey to meaningful graphs

- 10 min presentation of graphs we developed
- 20 min discussion about **usefulness** and **user-friendliness**

- What we expect as an outcome
 - What graphs do you prefer?
 - What graphs do you consider most important?

- What do you want to take away?
 - Information from the graphs?
 - Ideas for visualisations?
 - Interaction with other stakeholders?

A picture says
more than
10000 words.

Why is visualisation important?

Image
condense
data.

Visualisation is
a key data
analysis tool.

You can
visualise
patterns and
connections
that matter.

In a connected
world absolute
figures are not as
true as they could
be.

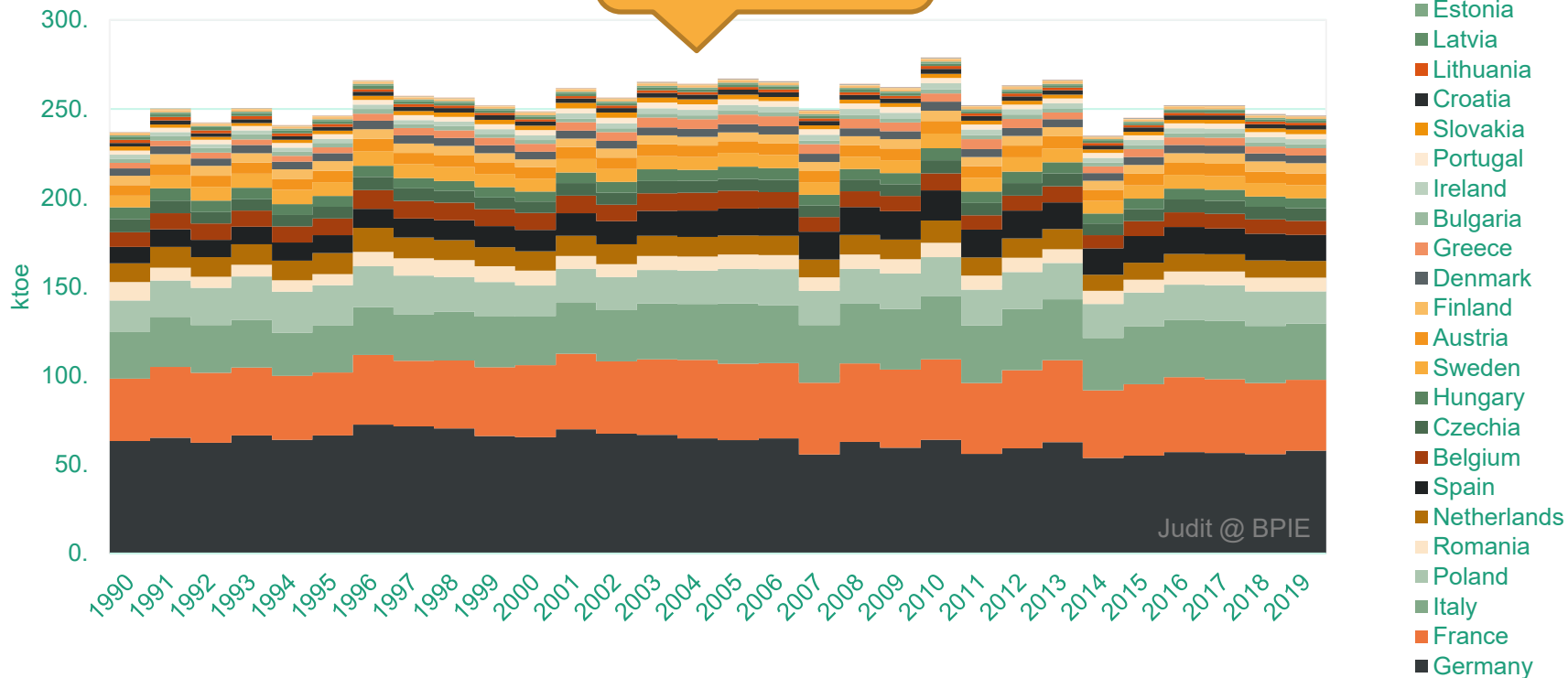


Tools to visualise patterns that matter in the data

- Sort
- Use space in a meaningful way
- Group
- Aggregate
- Combine
- Compare
- Statistical Data
- Messages (dynamic)

- 1. sort ascending
- 2. eliminate space

Top countries are very small



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Clusters for grouping and aggregating

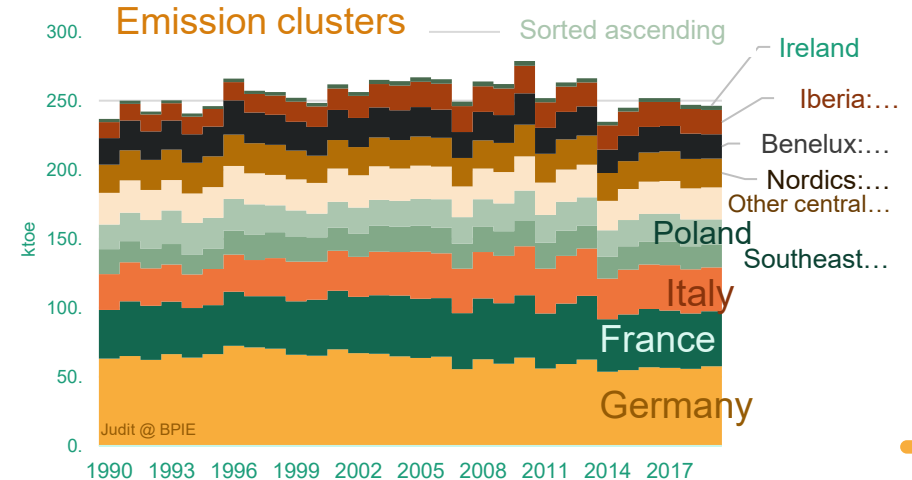
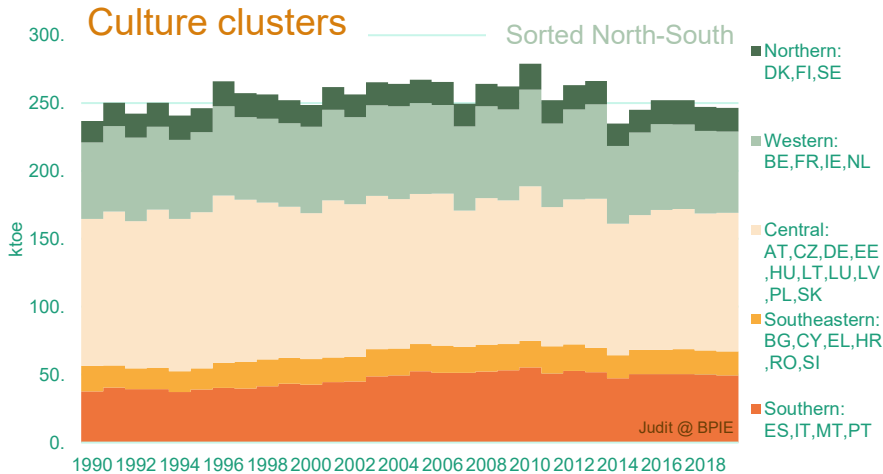
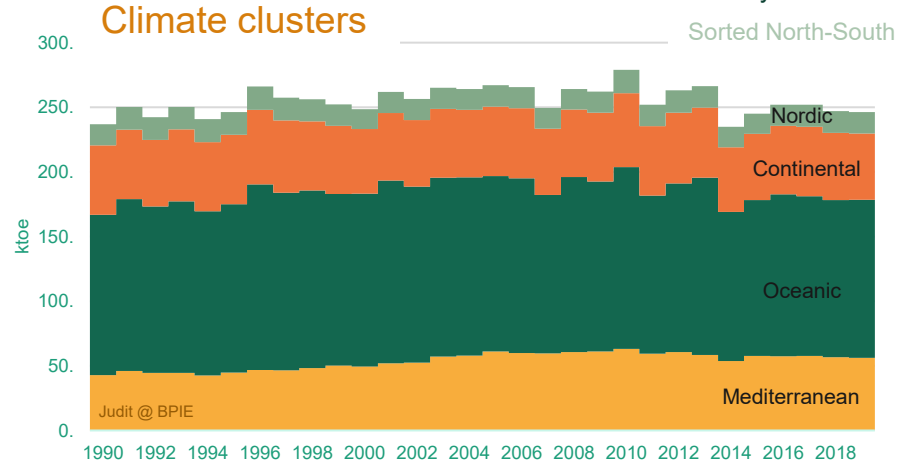
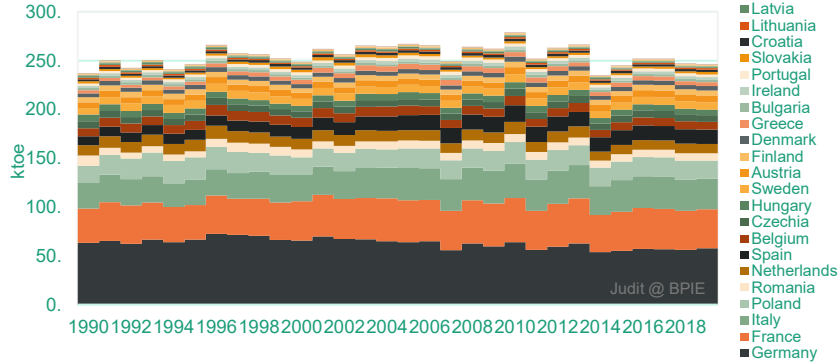
Country	Climate clusters EPBD (2021)	Building Emission clusters McKinsey2020	Cultural clusters P.Jordan 2005
Sweden	4_Nordic	Nordics	Northern
Finland	4_Nordic	Nordics	Northern
Denmark	2_Oceanic	Nordics	Northern
Lithuania	4_Nordic	Nordics	Central
Latvia	4_Nordic	Nordics	Central
Estonia	4_Nordic	Nordics	Central
France	2_Oceanic	France	Western
Ireland	2_Oceanic	Ireland	Western
Netherlands	2_Oceanic	Benelux	Western
Belgium	2_Oceanic	Benelux	Western
Luxembourg	2_Oceanic	Benelux	Central
Germany	2_Oceanic	Germany	Central
Poland	3_Continental	Poland	Central
Slovakia	3_Continental	Other central Europe	Central
Hungary	3_Continental	Other central Europe	Central
Czechia	3_Continental	Other central Europe	Central
Austria	3_Continental	Other central Europe	Central
Slovenia	3_Continental	Other central Europe	Southeastern
Romania	3_Continental	Southeast Europe	Southeastern
Bulgaria	3_Continental	Southeast Europe	Southeastern
Greece	1_Mediterranean	Southeast Europe	Southeastern
Cyprus	1_Mediterranean	Southeast Europe	Southeastern
Croatia	1_Mediterranean	Southeast Europe	Southeastern
Spain	1_Mediterranean	Iberia	Southern
Portugal	1_Mediterranean	Iberia	Southern
Malta	1_Mediterranean	Italy	Southern
Italy	1_Mediterranean	Italy	Southern

What information you see in these graphs?

Residential buildings | Final energy consumption

Source: Eurostat
Country: EU-countries

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Which graph do you prefer, please rank?

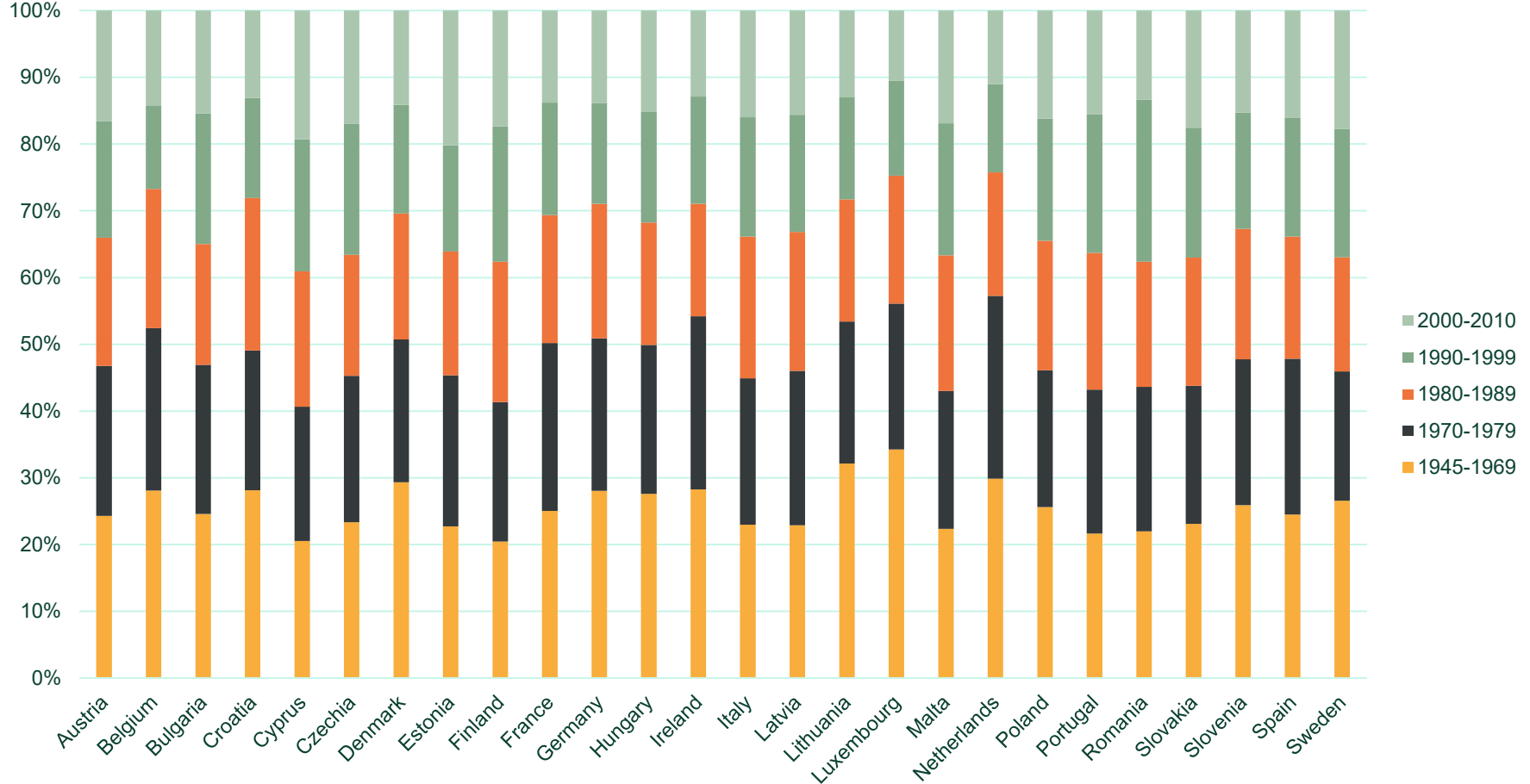
① Start presenting to display the poll results on this slide.

Starting point building data

Residential buildings | Final energy consumption | Construction period | Share

Year: 2016

Source: Hotmaps



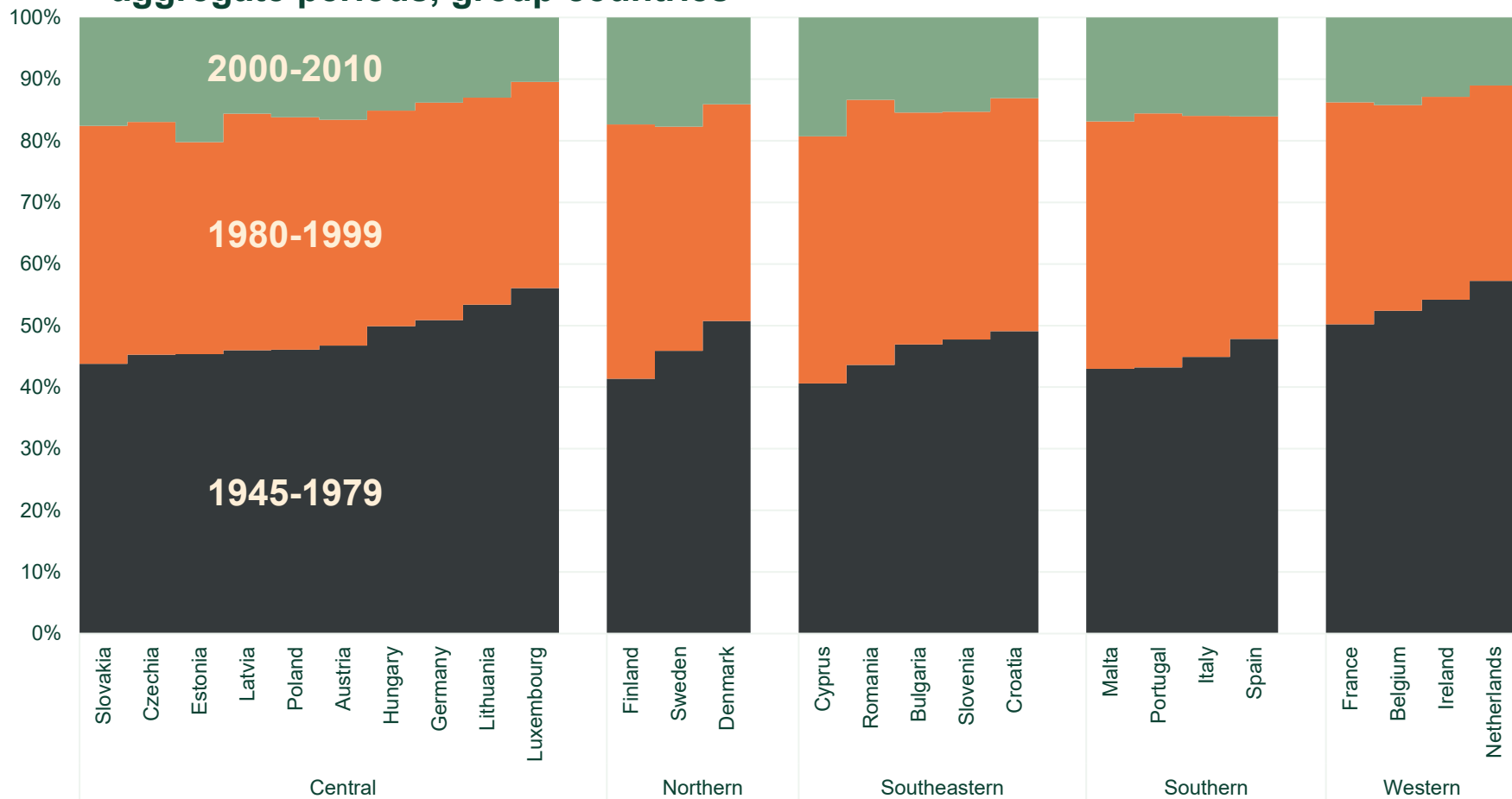


Sort, use space meaningful, aggregate periods, group countries

Residential buildings | Final energy consumption | Construction period | Share

Year: 2016

Source: Hotmaps

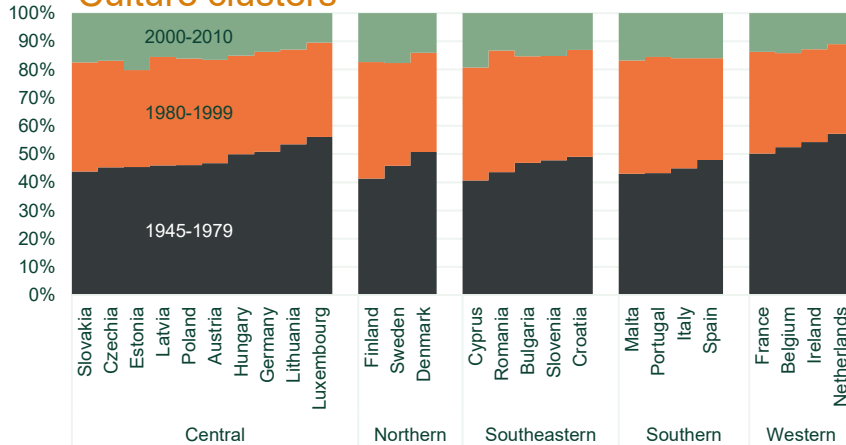




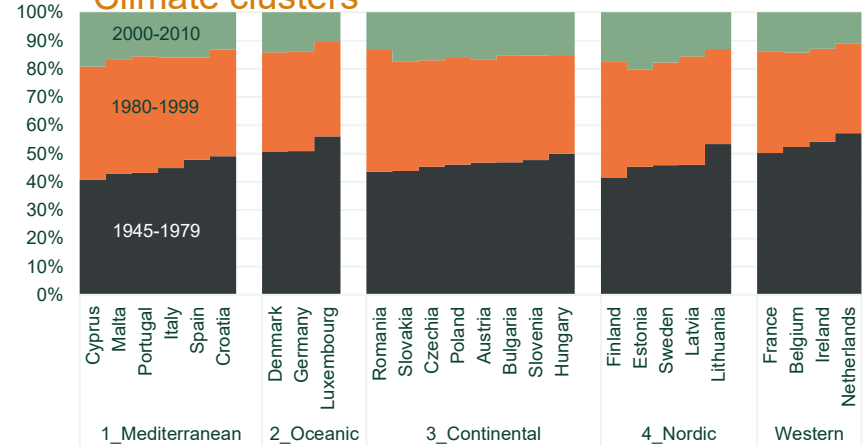
What information you see in these graphs?

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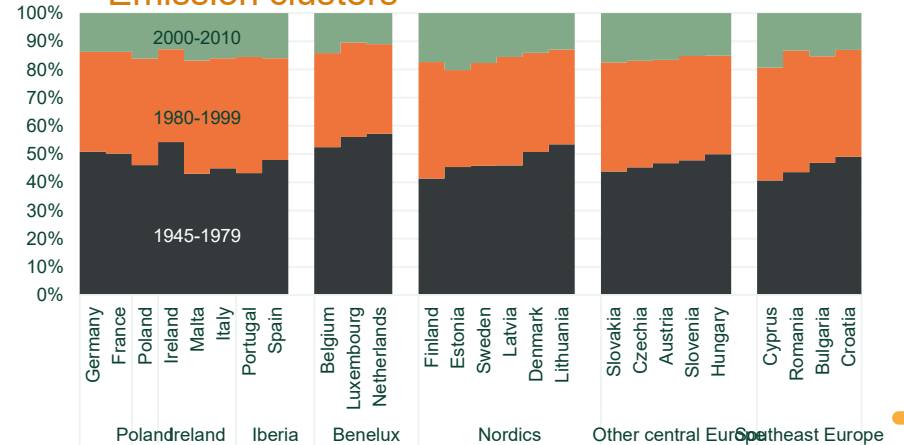
Culture clusters



Climate clusters



Emission clusters



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Which message would you interpret from these graphs?

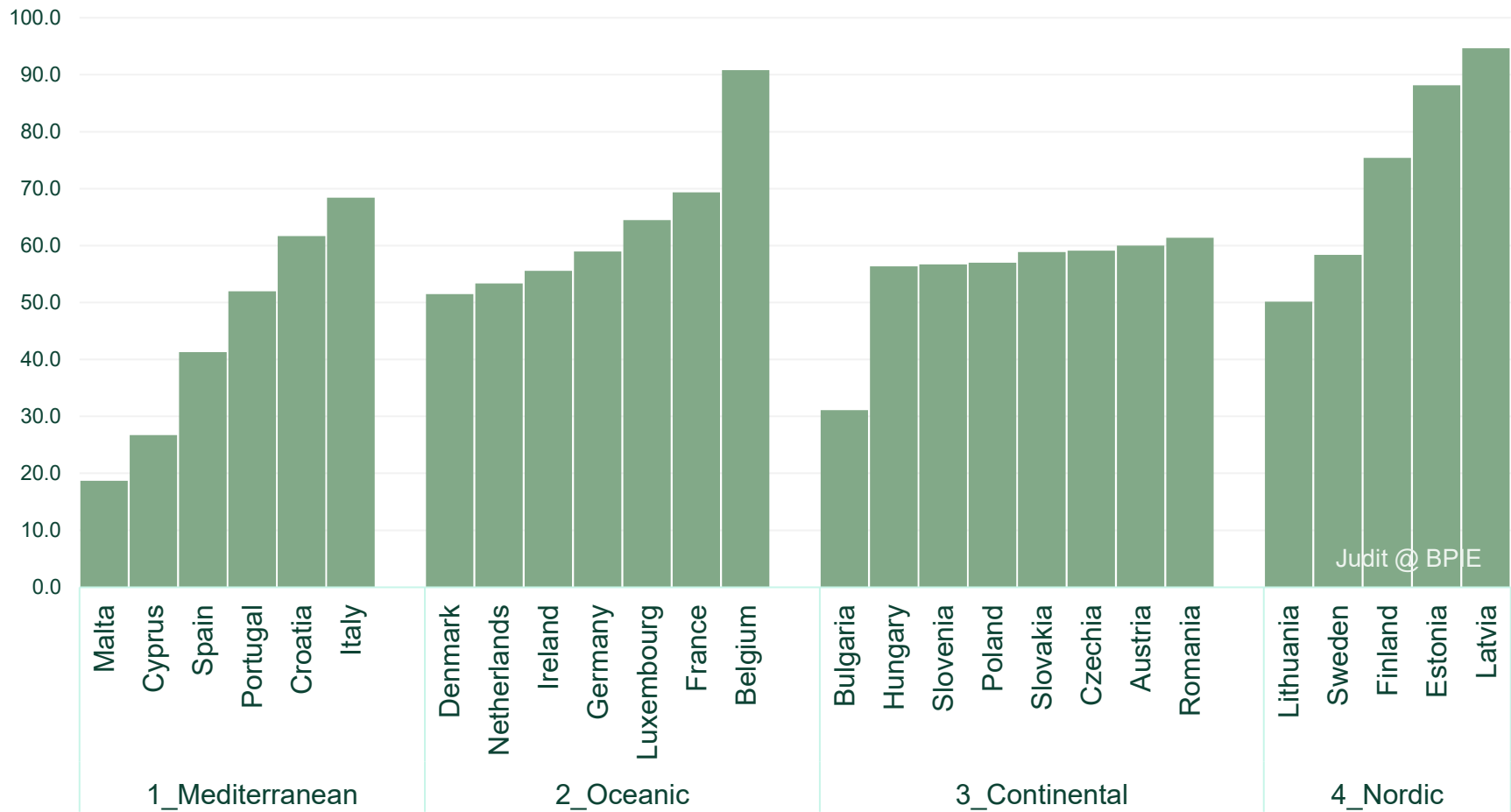
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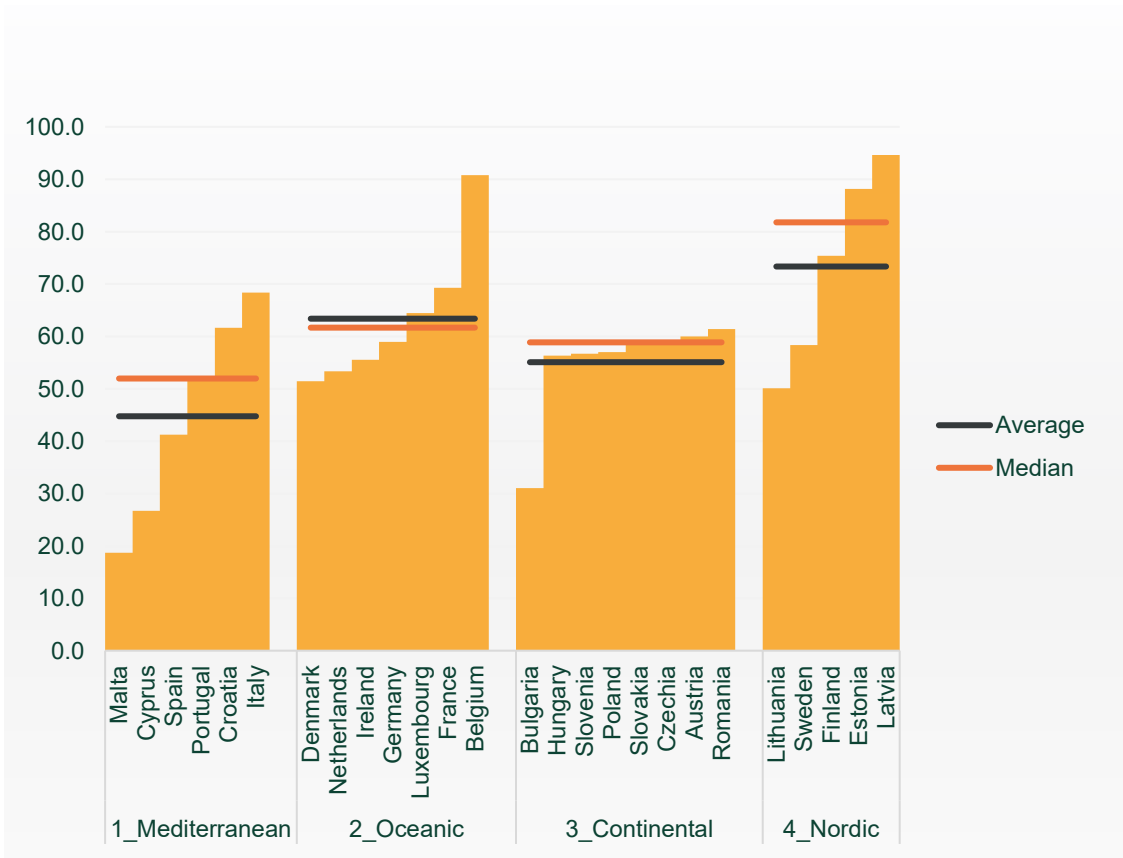
Compare to peers with similar climate

Residential buildings | Final energy consumption per floor area | Construction period

Year: 2016

Source: Hotmaps





- The Mediterranean group seems to be very diverse. Comparisons should be done with attention to the context. In the continental group the variance is very low, countries' final energy consumption per m² seem to be well-comparable with the exception of Bulgaria.
- Latvia and Belgium are the countries with highest final energy consumption per floor area, while Malta is the lowest between all countries
- In the different climate regions, Nordic and Mediterranean are the climate region with the highest difference between the countries
- Countries with highest final energy consumption in their climate region area Italy, Belgium, Romania and Latvia

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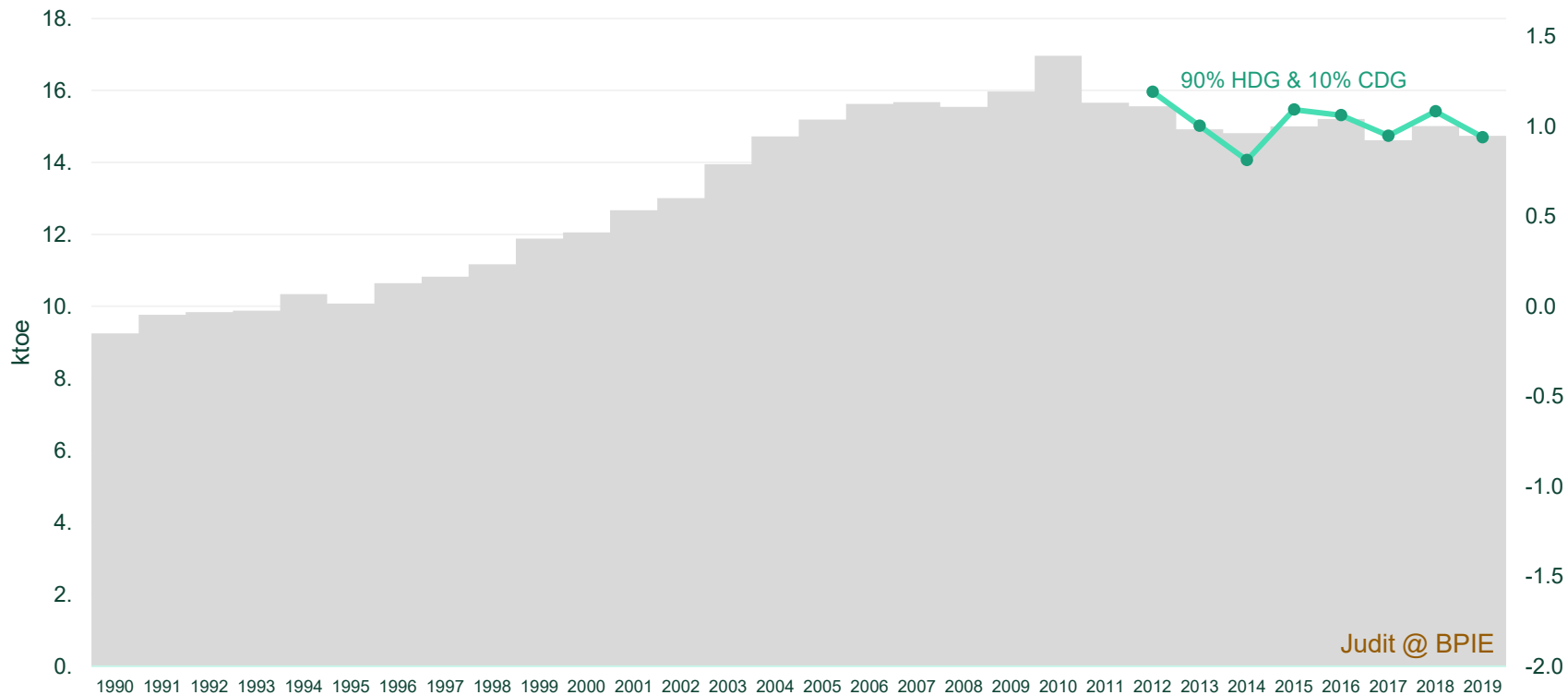


What other messages do you see?

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Combine building data with climate data

Residential buildings | Final energy consumption
Heating and Cooling Degree Days
Source: Eurostat
Country: Spain



Combine building data with energy data

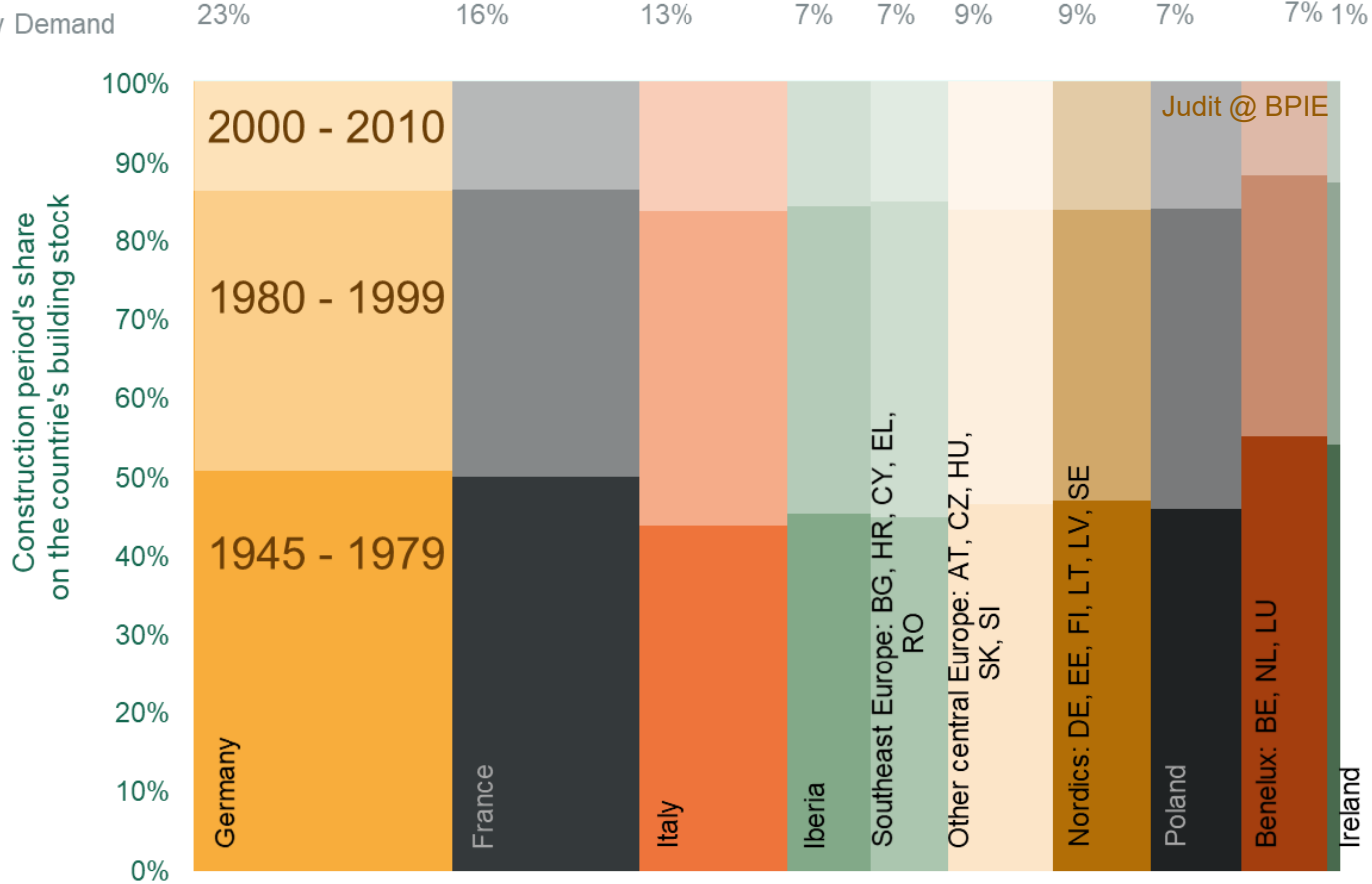
Residential buildings | Final energy consumption | Construction period | Share

Residential buildings | Final energy consumption

Source: Eurostat

Country: EU-countries

Share of EU
Final Energy Demand



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What other data should we combine building data with?

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Who could such graphs be useful for and what would they derive from them?

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Thank you.

You have been great.

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