



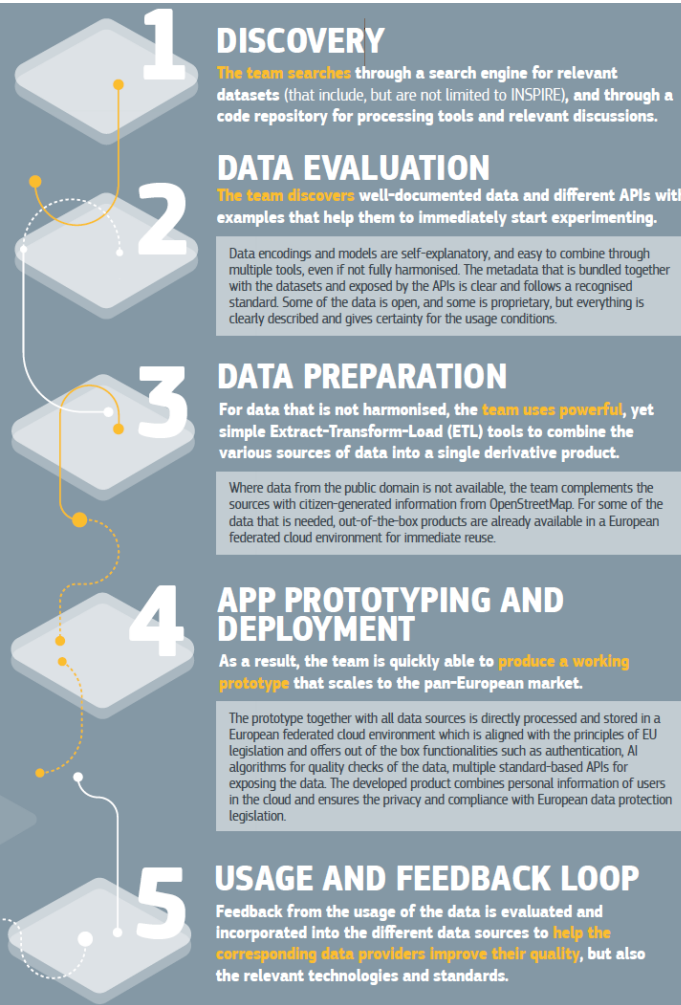
Mercator Research Institute on
Global Commons and Climate Change gGmbH

A user-driven data space: is INSPIRE ready?

Nikola Milojevic-Dupont

MCC Berlin, TU Berlin, Climate Change AI

milojevic@mcc-berlin.net @Nikola_MD



INSPIRE data for addressing real-world problems


- How much the platform and content of INSPIRE currently addresses users' needs?
- Sustainability researcher point of view:
using better data to better address timely problems
- Case study: Harmonizing building stock data at the EU level
- Technical set-up: building on open source geospatial software (Python geospatial stack, etc.)









Fields
ID
type
height
age
...
geometry





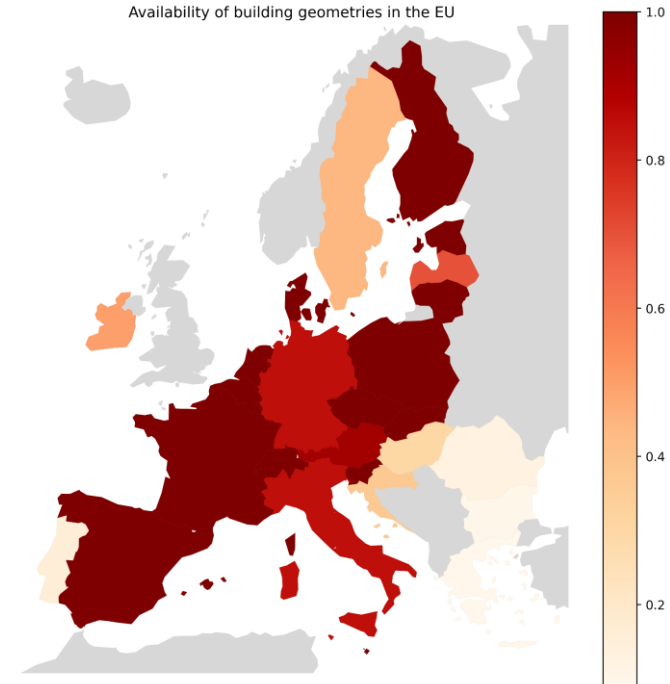
Buildings

— Def.: Geographical location of buildings.

  846
 136
 122

Building government data in the EU - overview

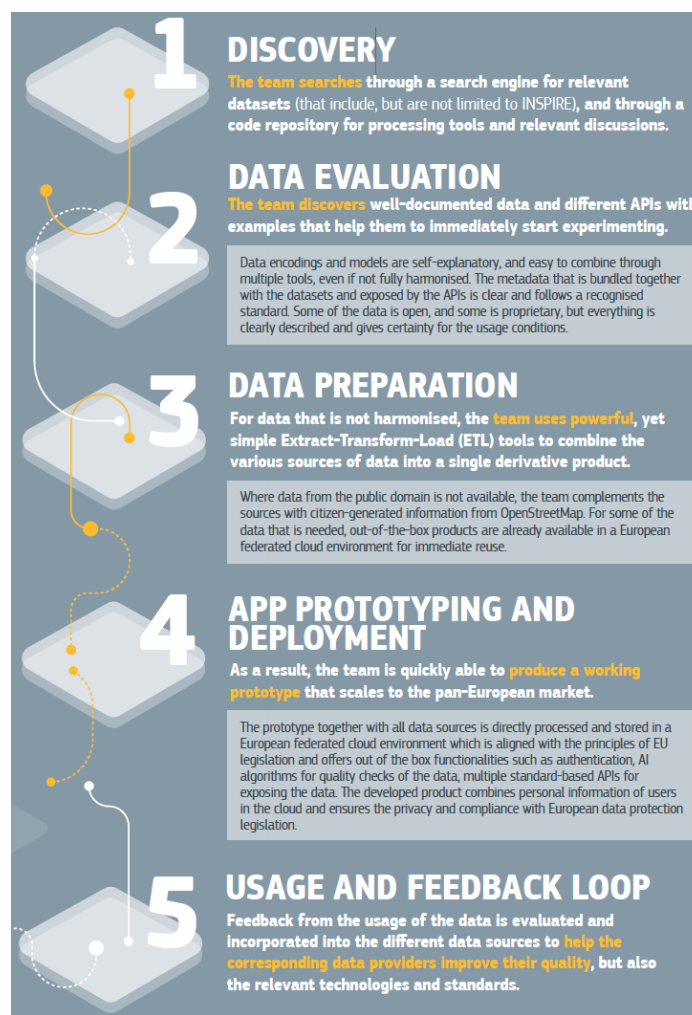
- Disclaimer: not only INSPIRE but open government building data in the EU
- How complete?
 - 80% coverage for footprints
 - low to very low for most attributes
 - INSPIRE is the most comprehensive resource
- How heterogeneous?
 - Attributes, encoding, licenses, metadata, documentation, etc.. are very diverse
- Standards? Helpful but not fully followed, updates to more recent standards?



Creating a pan-European dataset from INSPIRE

- Understanding what data are really available takes way more than a few clicks
- Downloading the data can be difficult, in particular mass download
- Data still far from being well-harmonized, requires extra work for comparative studies
- Complementing INSPIRE: other government data sources, OpenStreetMap, satellite product e.g. Global Urban Footprint
- Machine learning for filling data gaps (Milojevic-Dupont et al, 2021 PLOS)

```
for country in EU27:
    for subcountry in country:
        for tile in subcountry:
            webscrape(param1,
                      param2,
                      param3,
                      ...)
```



Time consuming effort, improvements (names, regions, visualizations?) here are likely to increase usage



Downloading and harmonizing the data are major bottlenecks with large potential for improvement within INSPIRE?



Positive interactions with governments, interested in outcomes of the work



Documentation is still mostly hosted by governments, harmonization would help. Local user vs EU user?



Achieving a pan-European scale is a huge value added from a sustainability perspective, especially if more dimensions could become available



Thank you!

milojevic@mcc-berlin.net

milojevicdupontnikola.github.io

[@Nikola_MD](https://twitter.com/Nikola_MD)