

# CityGML development for UCD and Dublin

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IBPSA Project 1 Expert Meeting

RWTH Aachen, Germany



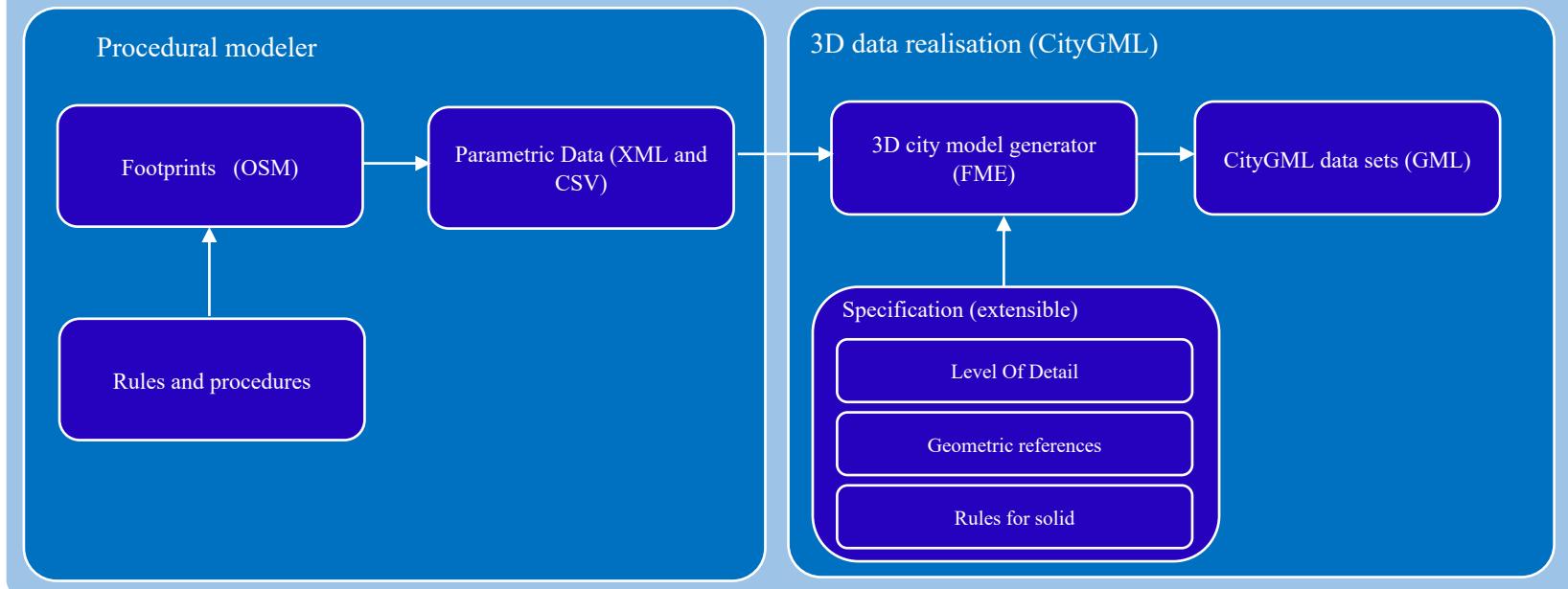
## Aim

Develop a CityGML model for Dublin city buildings.  
Currently, we don't have any 3D model for Dublin.  
Our first pass has in excess of 15,000 buildings.

We needed to pay for heights data so we worked with publicly available resources.

# Semi-automated workflow chosen

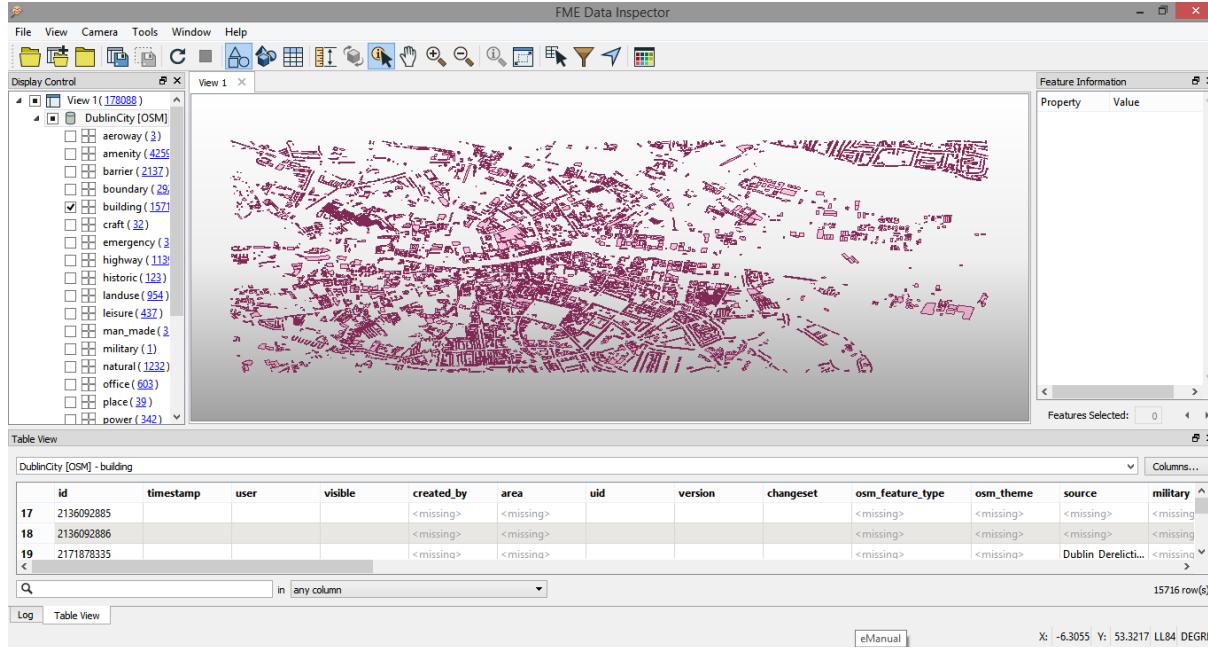
## DUBLIN 3D CITY BUILDING MODEL



# Import footprints from OSM to FME

- We used Open Street Map as our starting point
- Select localisation window
- Export file with extension Office XML Handler (default file extension)

# Transfer IDs and information from FME to Excel

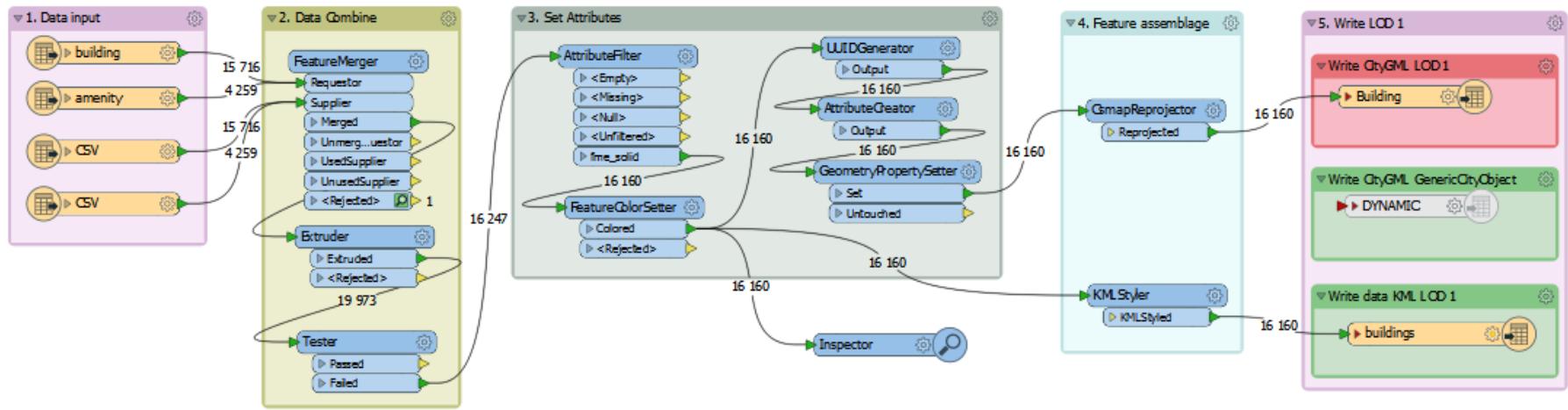


Before transfer all IDs and data from OSM to Excel, for the purpose of inputting estimated heights, sort IDs in FME data ‘Ascending’. This significantly reduces processing time as, generally speaking, IDs which follow each other are in same locality.

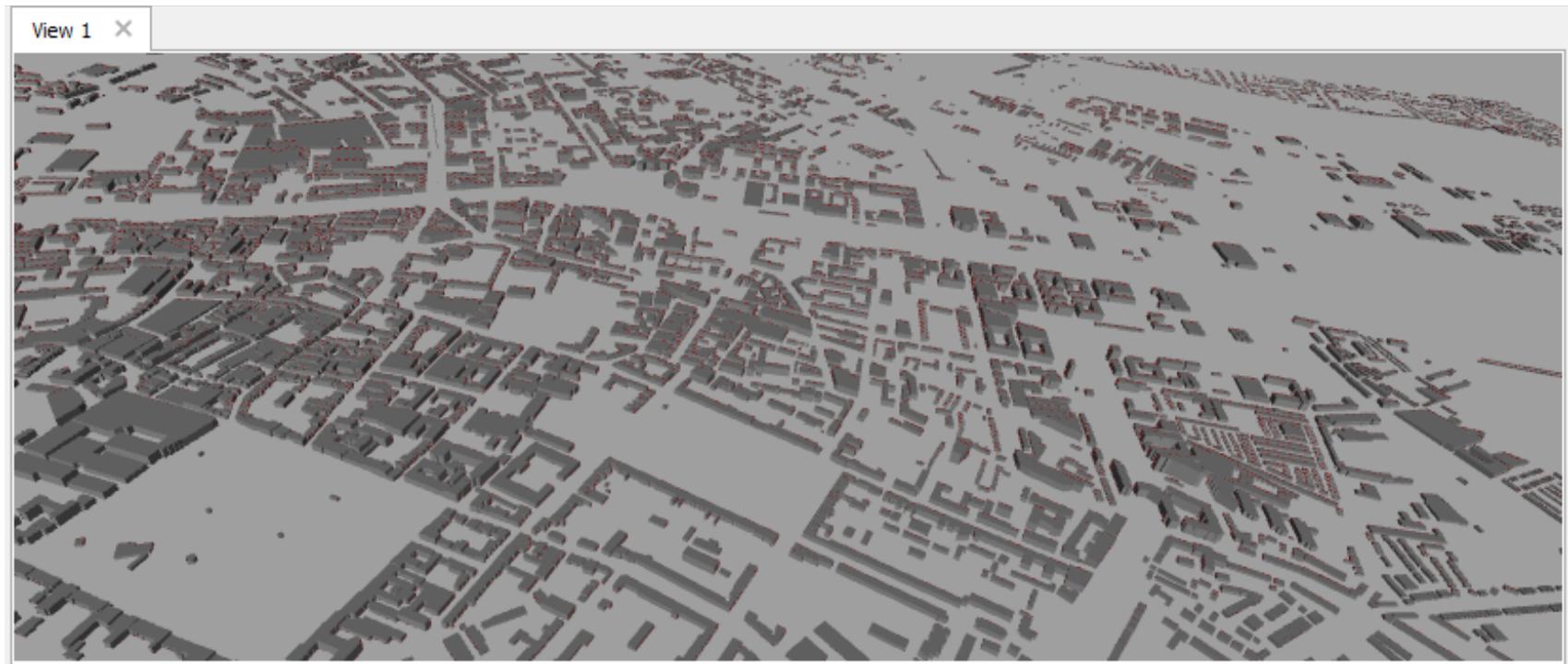
# Input Estimated heights in CSV file \_ LOD

	A	B	C	D
1	id	building	estimated_height	real_height
2	233674053	yes	4.8	
3	233672448	yes	4.8	
4	233672449	yes	4.8	
5	233672446	yes	4.8	
6	233672447	yes	4.8	
7	233718292	residential	7.2	12
8	233718293	residential	7.2	12
9	233675431	yes	4.8	9.6

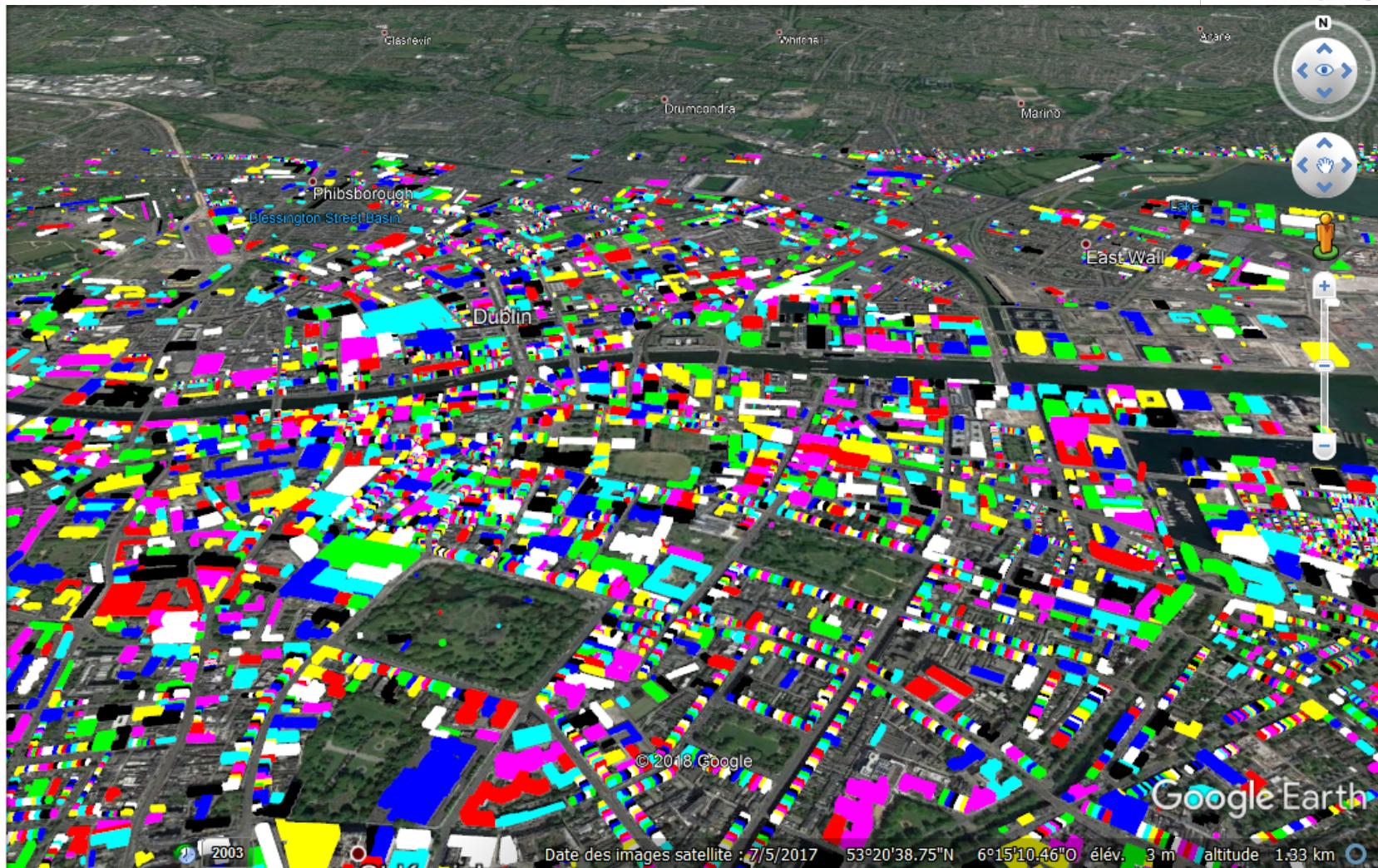
# LOD 1 Workflow



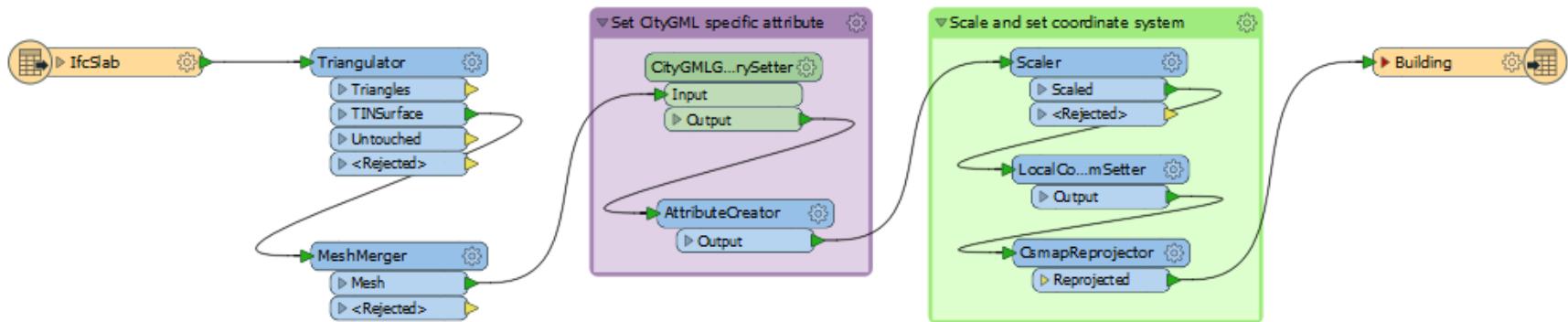
# CityGML output in FZK viewer



# KML in Google Earth



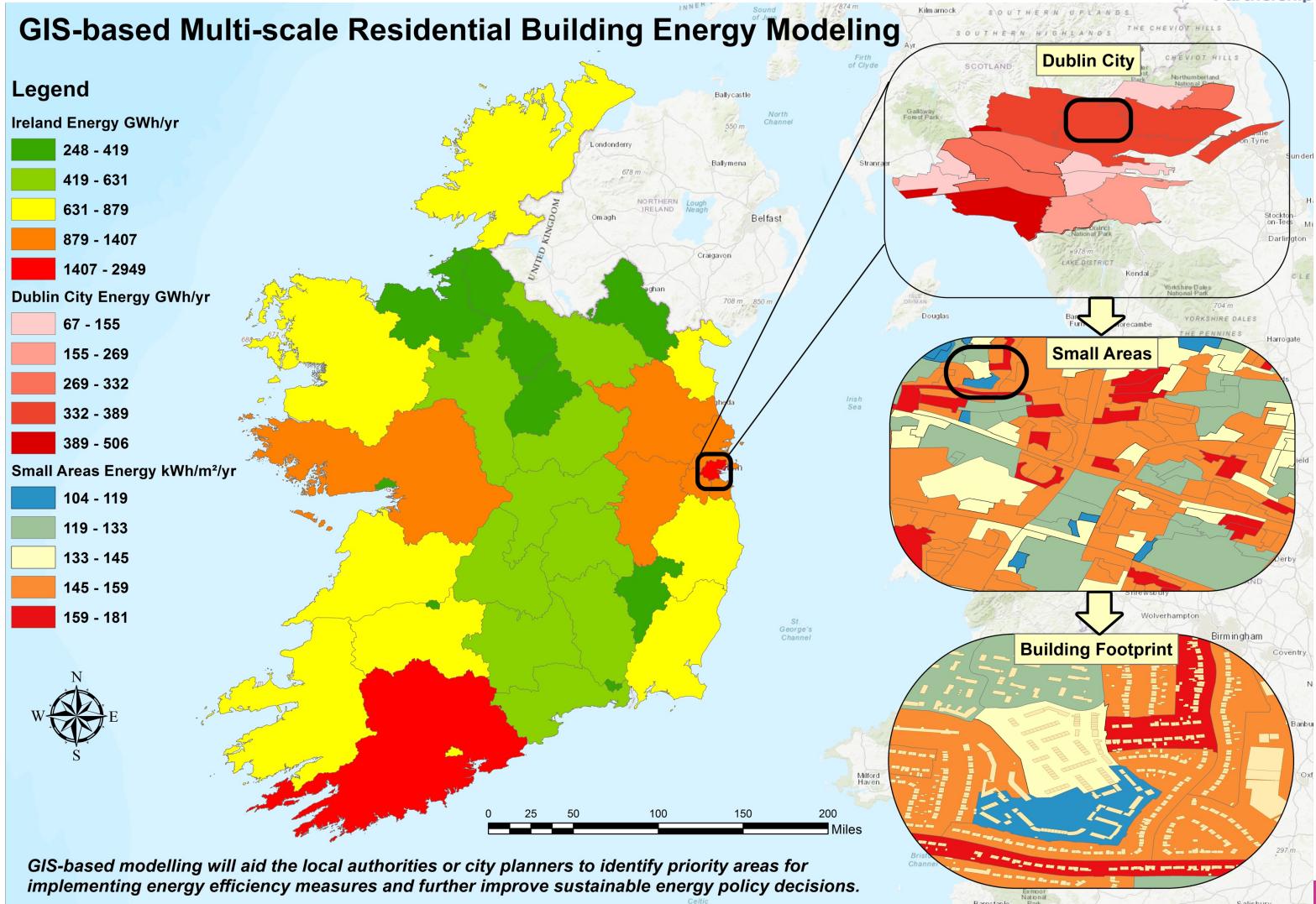
# LOD 2 Workbench



# Next steps

- The national energy agency, Sustainable Energy Authority of Ireland (SEAI) have asked us to move in a different direction.
- Policy level decisions relating to the building stock are being made based on Energy Performance Certificate (EPC) data.

# We see a significant opportunity to combine CityGML and EPC data for decision making by urban planners and policy makers



## Contact Details

[www.esipp.ie](http://www.esipp.ie)



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