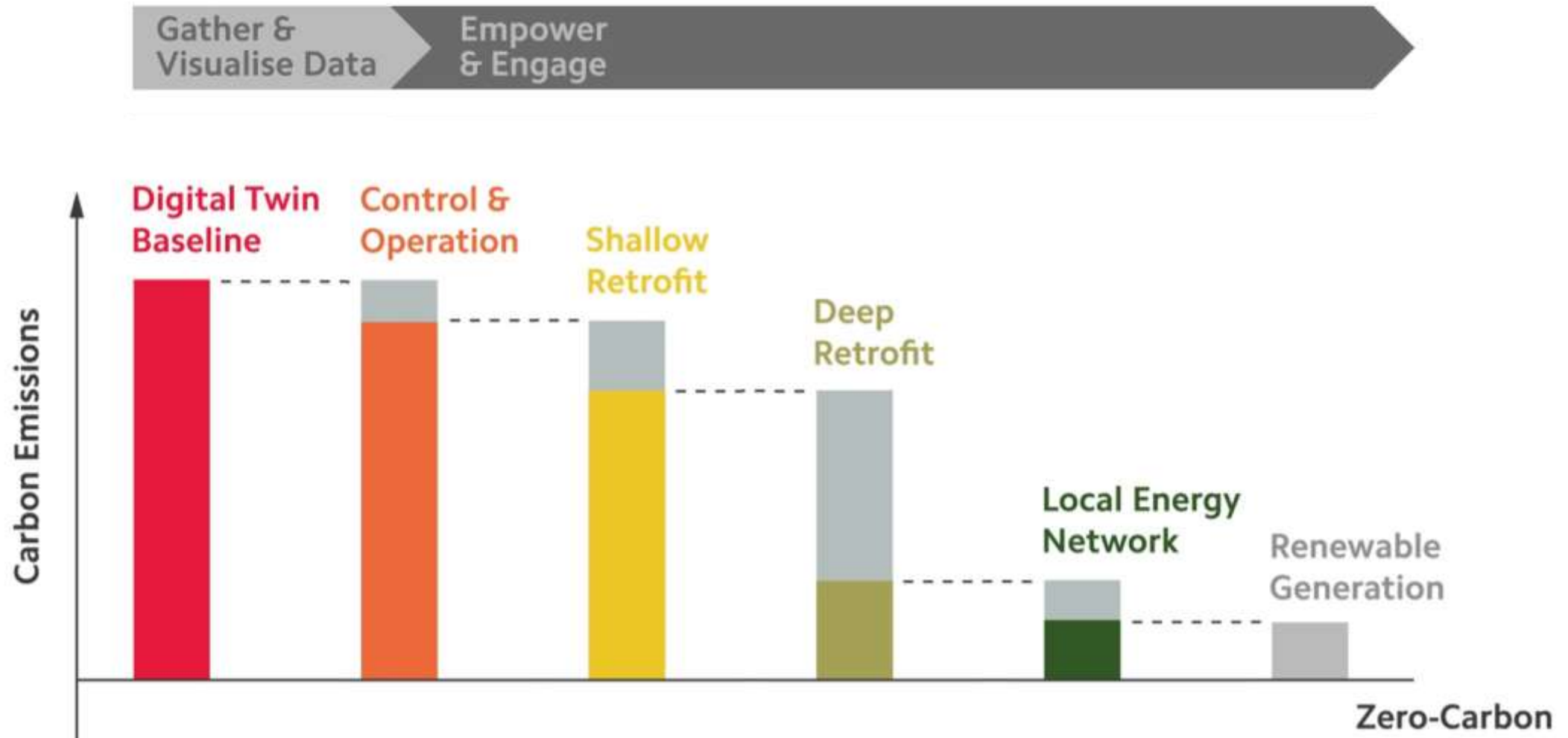




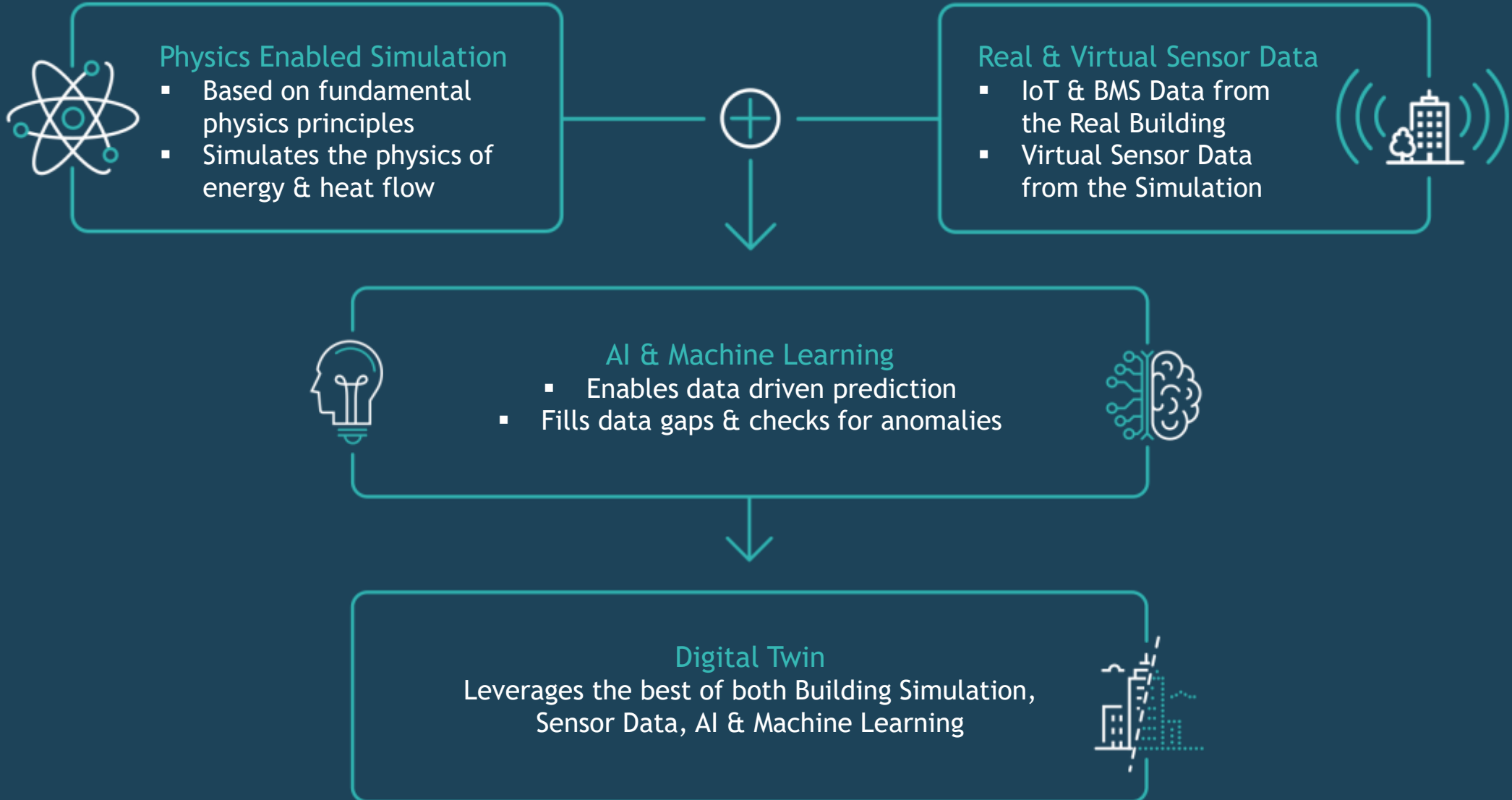
Decarbonisation Road-mapping Pathways to Net-Zero

Dr Eric Roberts, Business Development Manager, IES

How do we get to Net-Zero?



The Best of Physics, Data and AI/ML



Digital Twin Services



Digital Twins for Net-Zero Investment Road Mapping

- De-risk capital investments
- Deliver rental premiums of 6-11% more
- Positive 25-year financial return with modest capital cost uplift
- Save 20-70% on operational energy costs
- Informed Retrofit/Renovation/Rebuild decisions
- Balance occupant wellbeing with net-zero targets, and costs
- Ensure projects deliver by tracking progress in real time
- Communicate your net-zero plan using visually engaging 3D models



Digital Twins for Net-Zero Investment Road Mapping



Building Level
Net Zero Roadmap



Campus/Portfolio Level
Net Zero Roadmap



City Level
Net Zero Roadmap

Limerick Climate Action Plan

- Building targets:

- All public sector buildings to B2 BER by 2030



- 50 mm external wall inner insulation



- Double glazing with U-value of 1.6 W/m²K



- 100 mm roof insulation added



- Full LED lighting upgrade



- Reduction in heat losses and rate of infiltration



- Air source heat pump (CoP 2) for space heating and domestic hot water

- Transport targets:

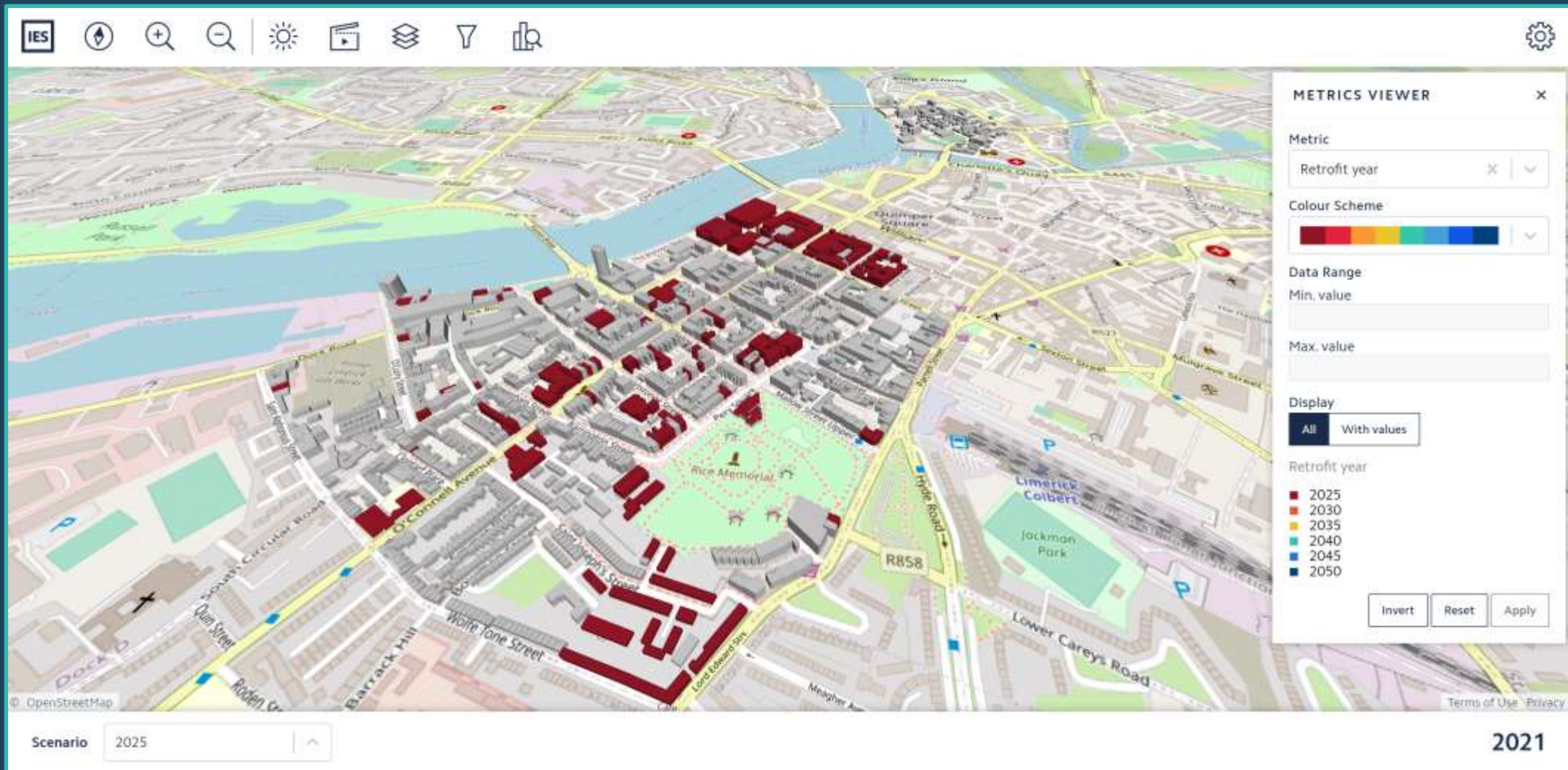
- 60% of private cars electric by 2050
- More public and active transport journeys

- Energy Trading and Community Projects

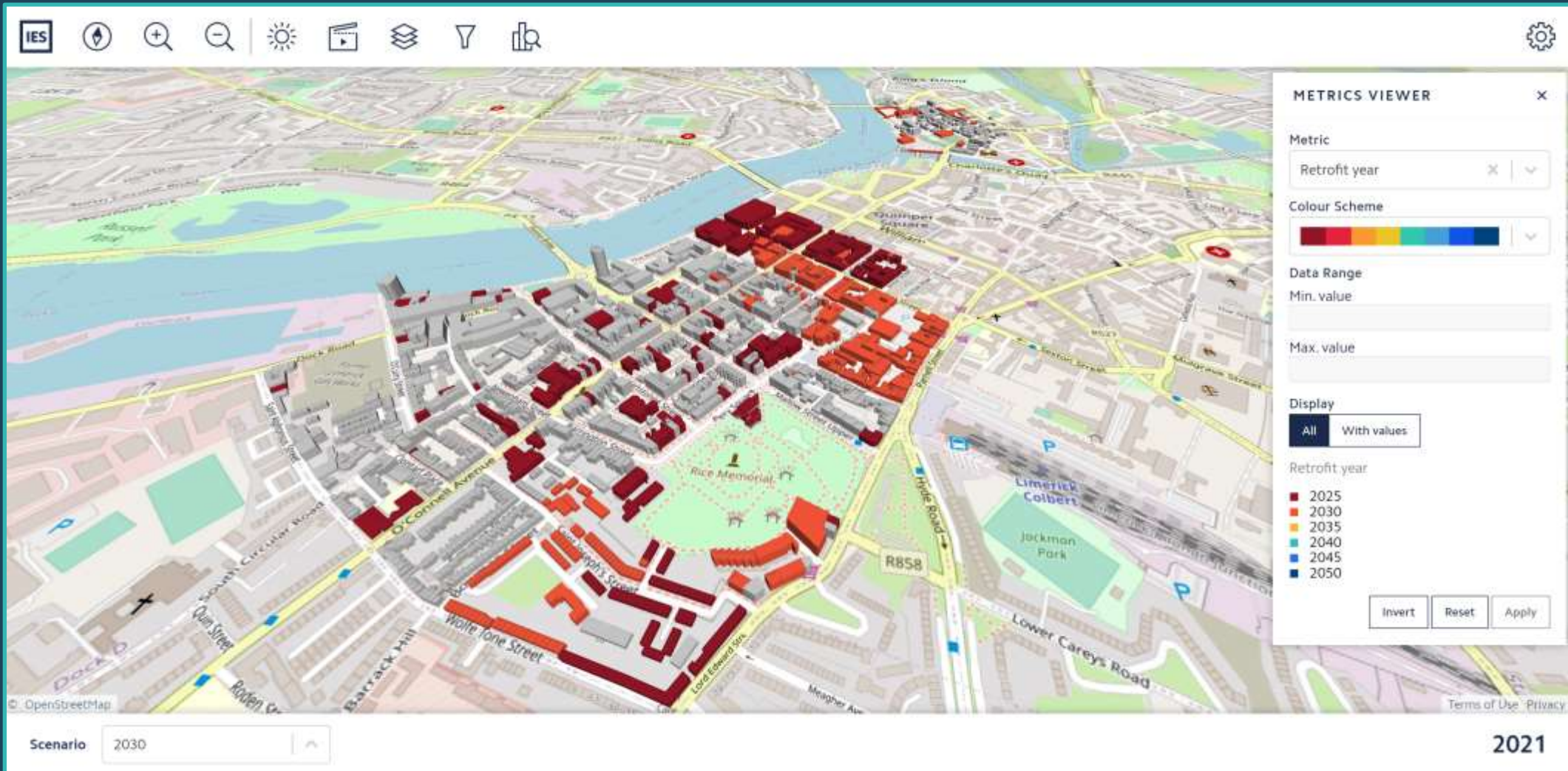


Climate Action Plan (2021)
IEA Net Zero by 2050 (2021)

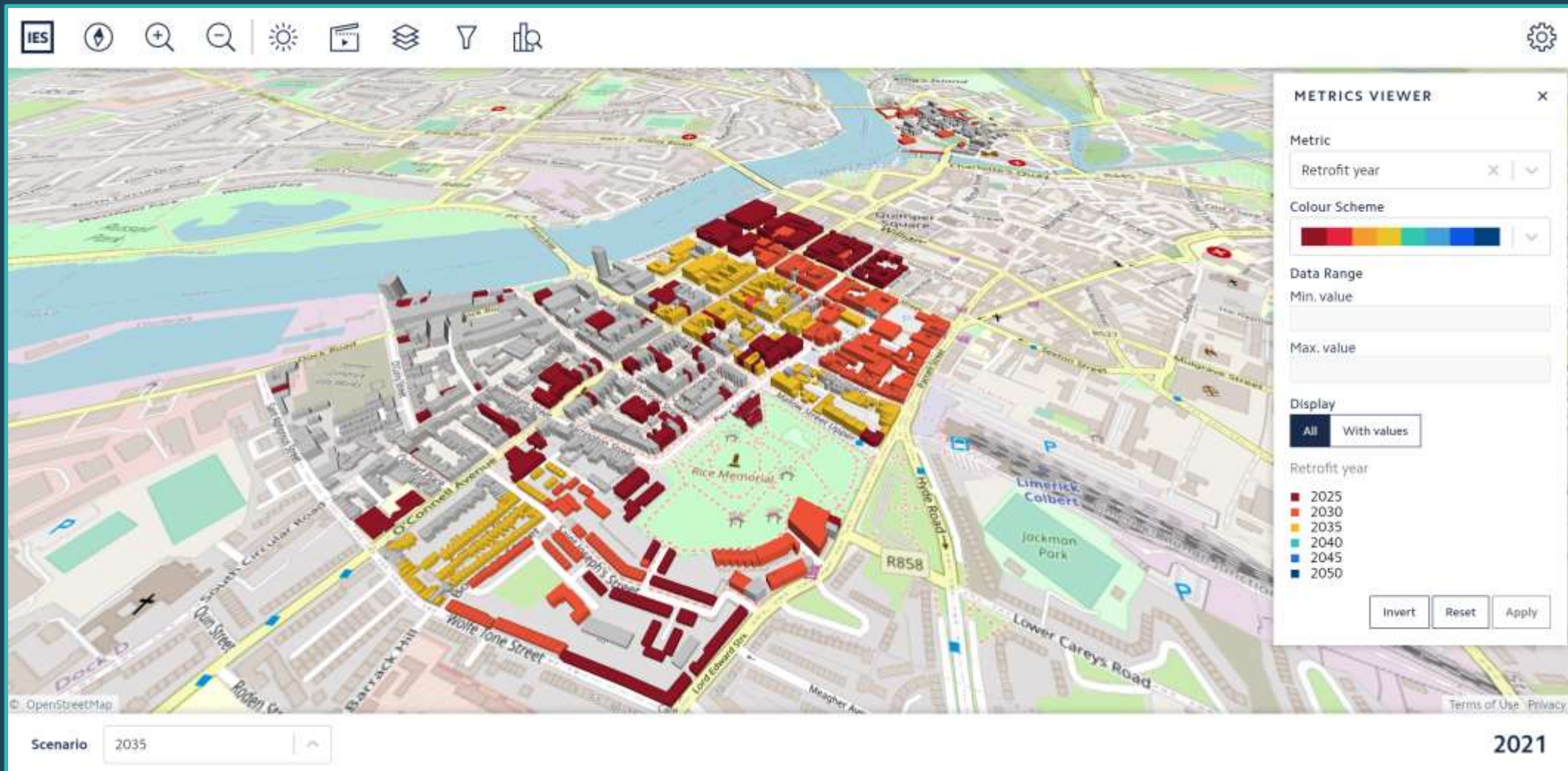
Retrofit - 2025



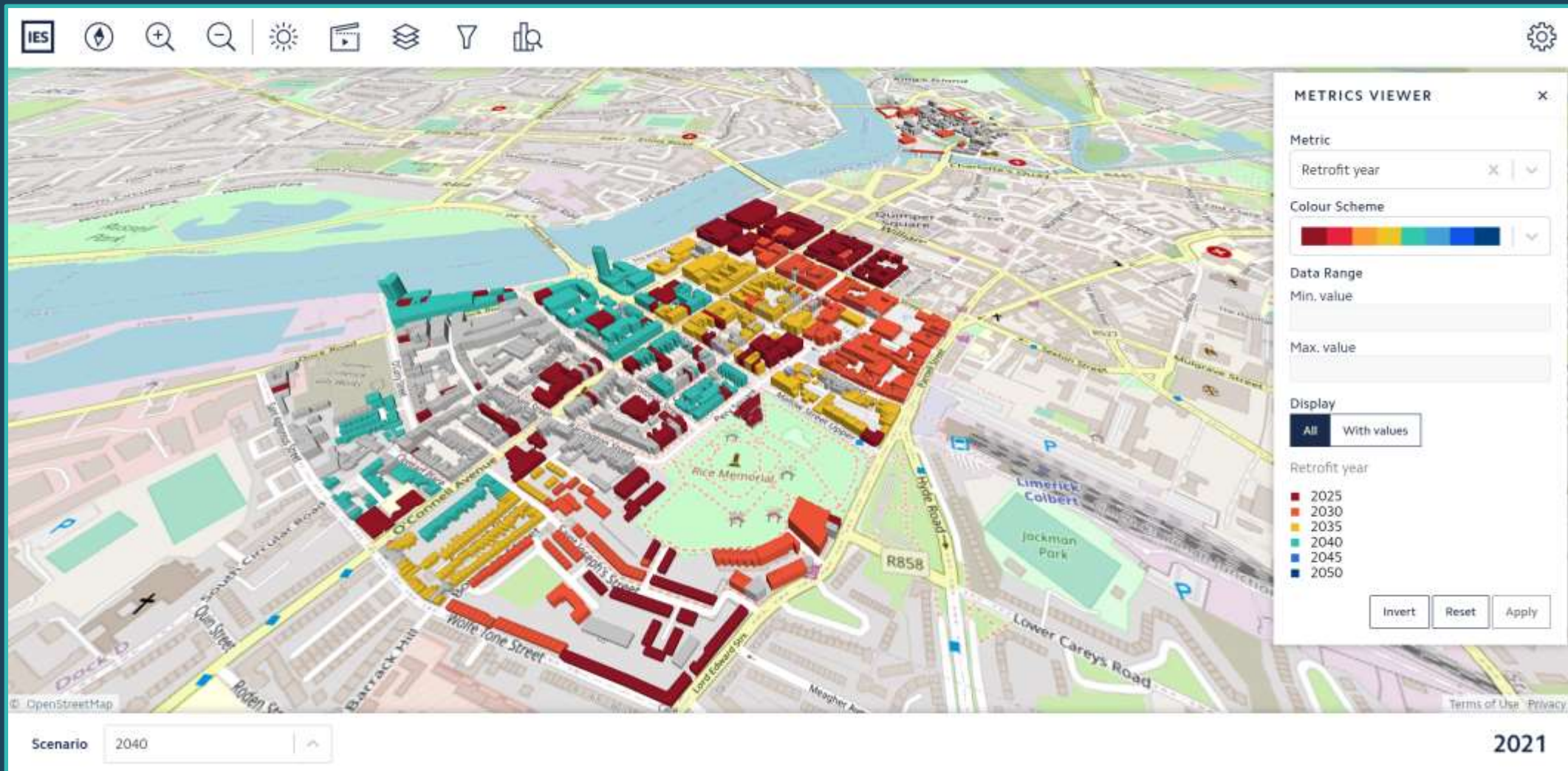
Retrofit - 2030



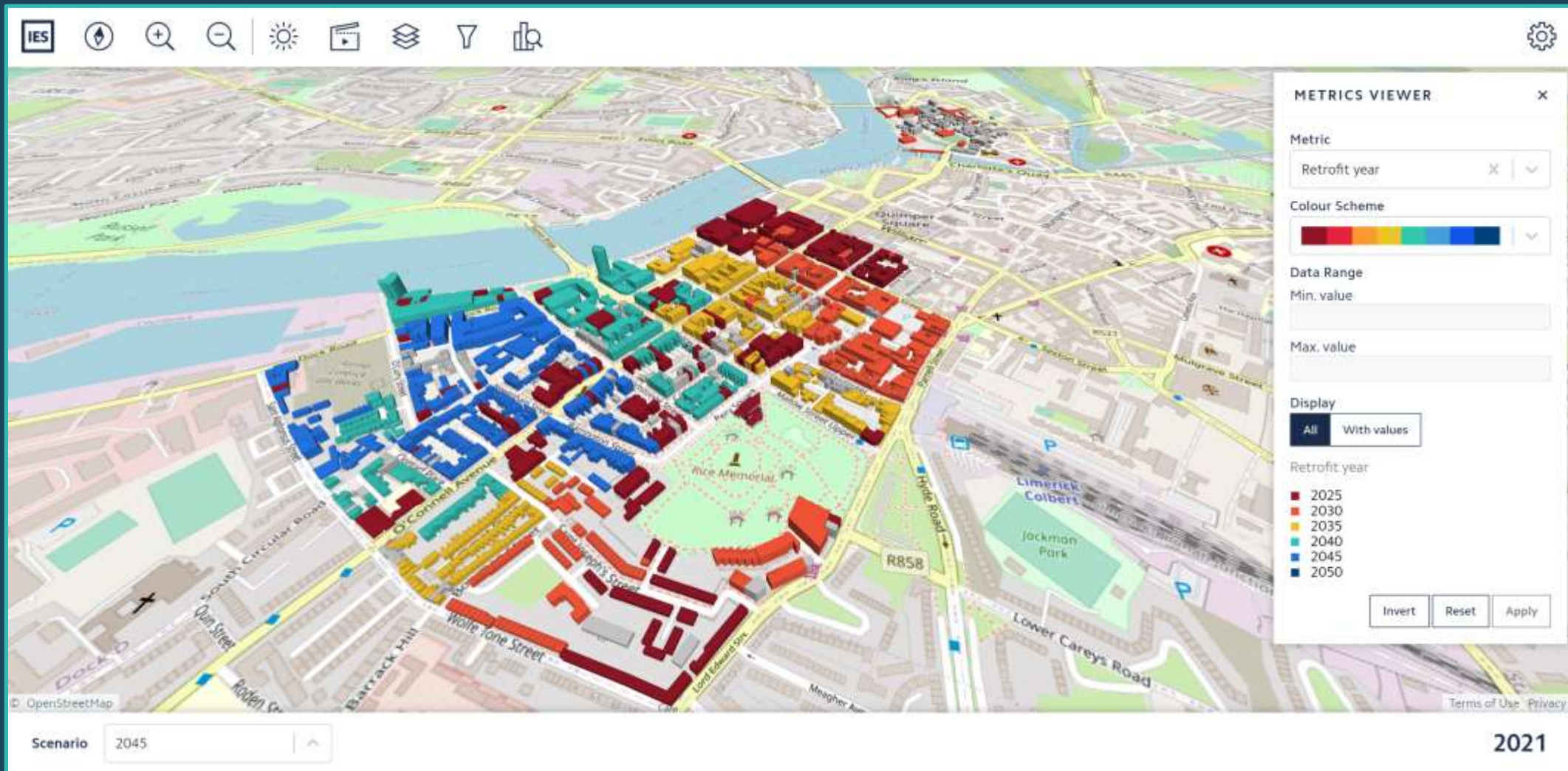
Retrofit - 2035



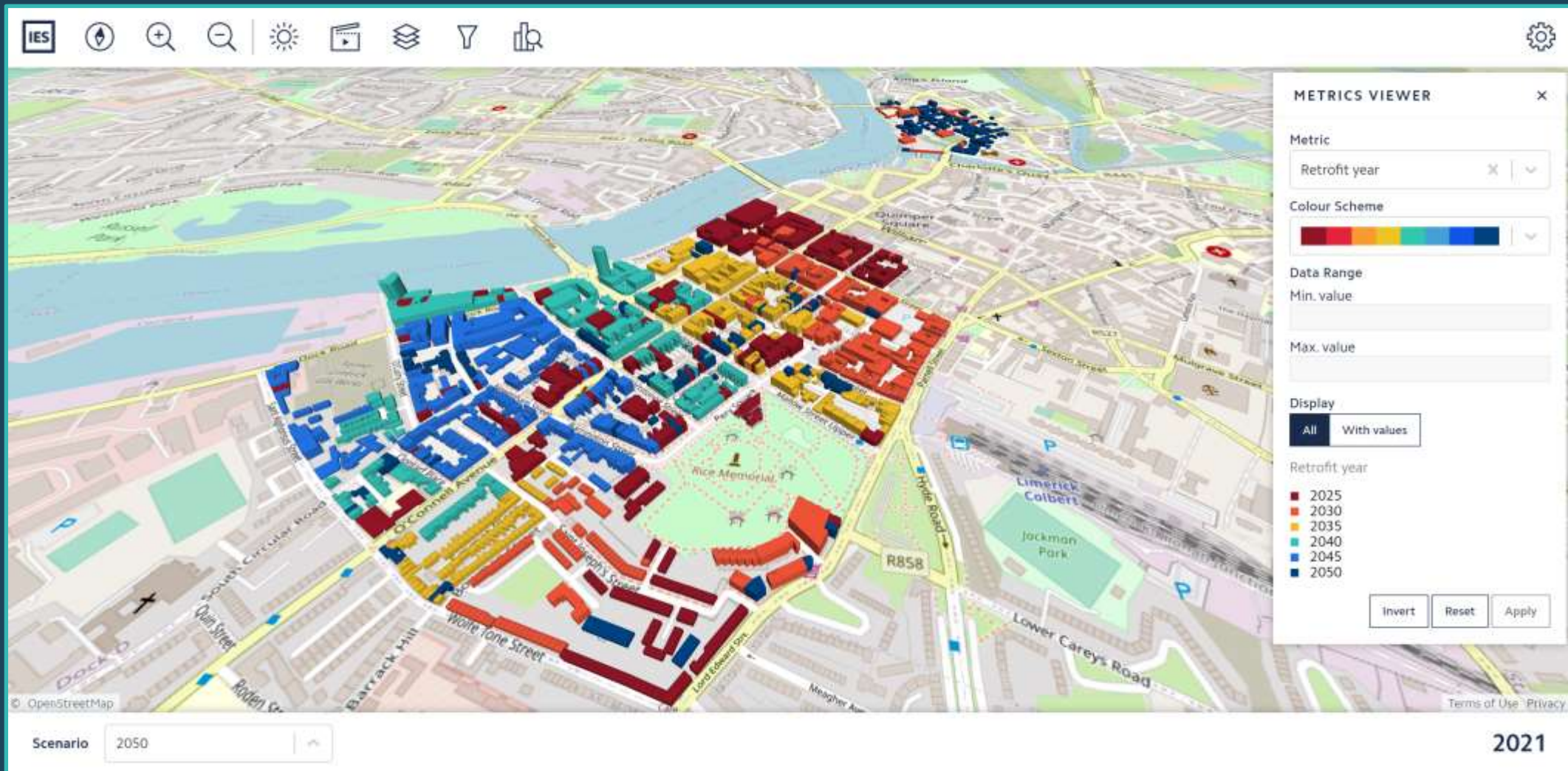
Retrofit - 2040



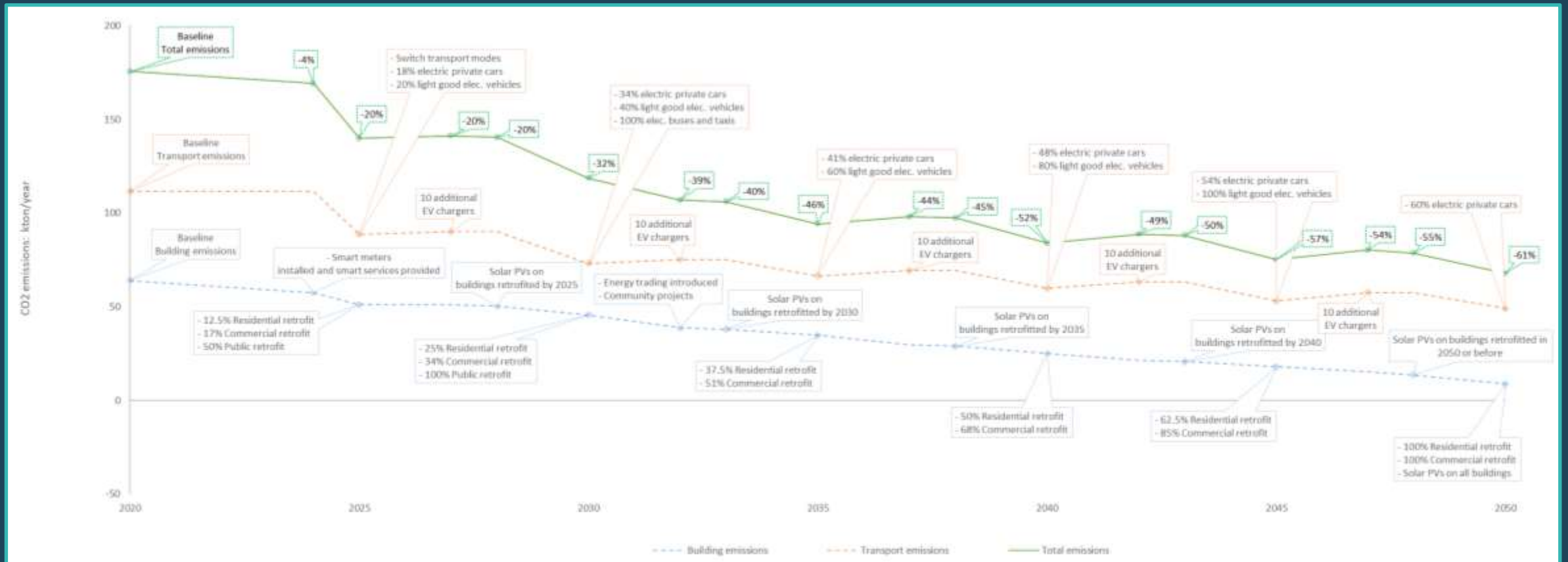
Retrofit - 2045



Retrofit - 2050



Limerick Decarbonisation Roadmap





Thank You

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