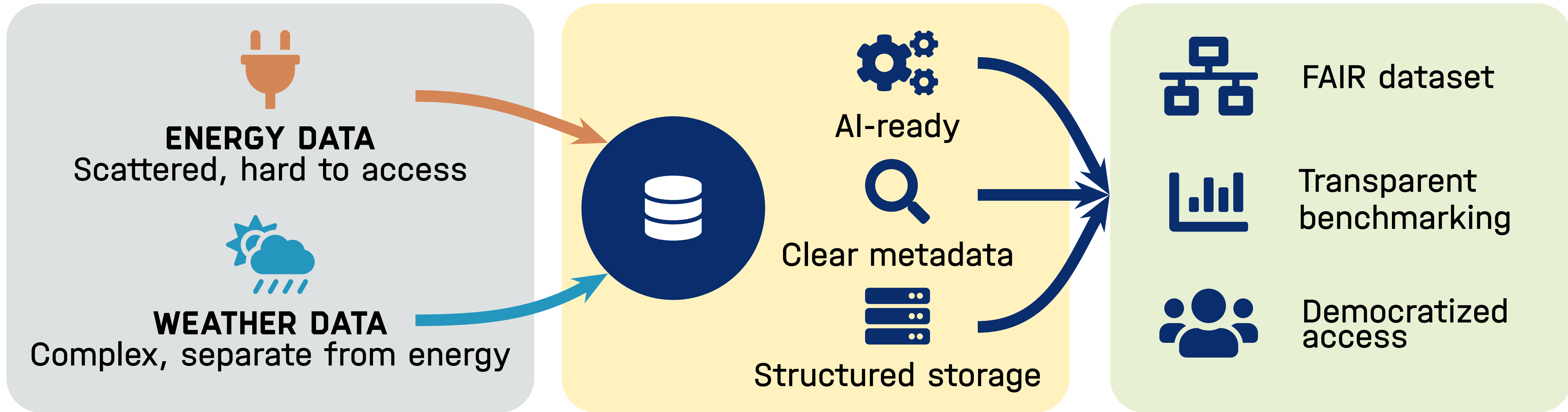


RenewBench: Real Energy Data You Can Actually Use

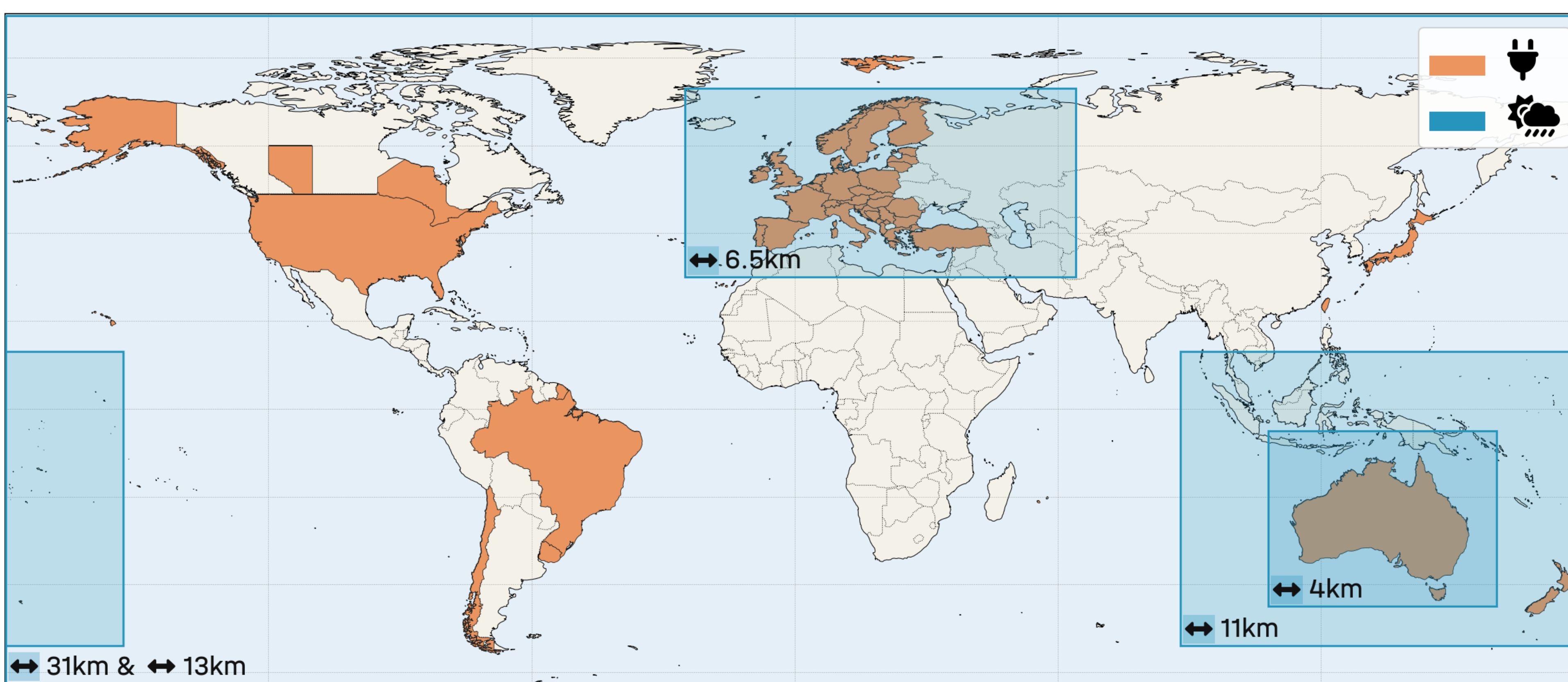
Elena Vollmer^{1,3}, Andreas Beckert^{2,3}, Hadeer El Ashhab^{1,3}, Paul Keil^{2,3}, Benjamin Schäfer^{1,3}, Beate Geyer², Markus Götz^{1,3}, Tobias Weigel^{2,3}, Kaleb Phipps¹

¹ Karlsruhe Institute of Technology, ² Helmholtz Center Hereon, ³ Helmholtz AI

WHY RENEWBENCH?



DATA COVERAGE



DATA FORMAT

- Time series
- Gridded arrays

TEMPORAL RESOLUTION

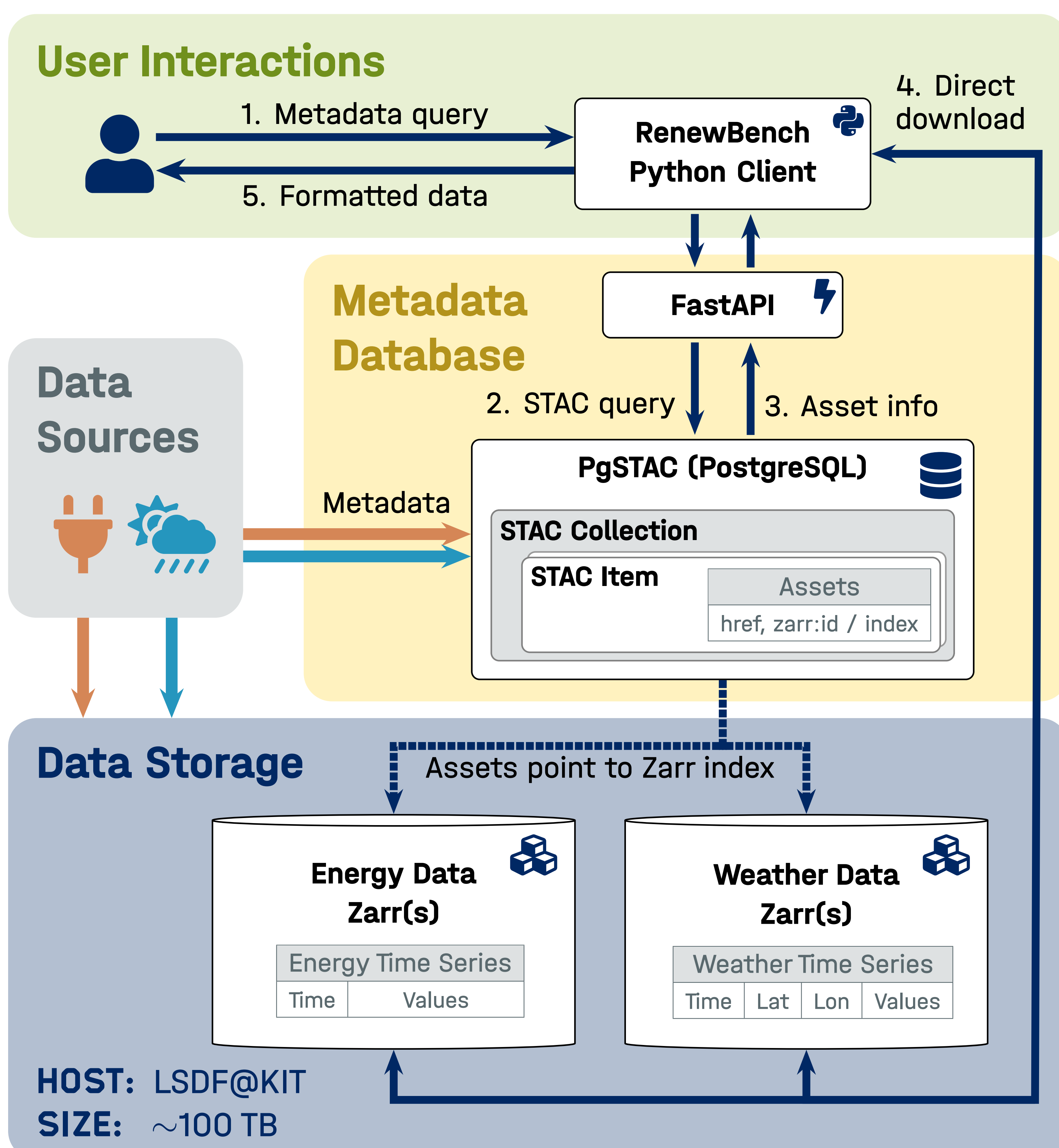
Per hour or higher

SPATIAL RESOLUTION

- Per unit or lower
- Per grid cell size (↔)

🔌 ADME, AEMO, AESO, CEN, EA Te Mana Hiko, EIA, ENTSO-E, EPIAS, IESO, ONS, Renewable-EI, Taipower
 ☁️ ERA5, ICON DREAM Global, ICON-DREAM Europe, BARRA2 R2 & C2

INFRASTRUCTURE



BENCHMARKS

- FORECAST 🔌 ...
...with / without ☁️,
...renewable / non-renewable
- DETECT faults
- VARY resolutions
- CREATE a 🔌☁️ foundation model

NEXT STEPS

- Easy-to-use PYTHON PACKAGE
- Open-source DATABASE

MORE INFORMATION

REPOSITORIES



FEEDBACK

