

Where does uncertainty actually matter?

Habnetic estimates posterior decision stability to identify the small subset of assets whose prioritisation is actually uncertain.

WHERE SHOULD UNCERTAINTY ANALYSIS FOCUS?

Habnetic estimates **posterior decision stability** for every asset.
 Most buildings remain consistently prioritised or consistently excluded across posterior simulations.
 Only a small decision boundary contains assets whose prioritisation may change under uncertainty.
 In Rotterdam, more than 99% of buildings lie outside this unstable boundary region.

CITYWIDE OVERVIEW – ROTTERDAM

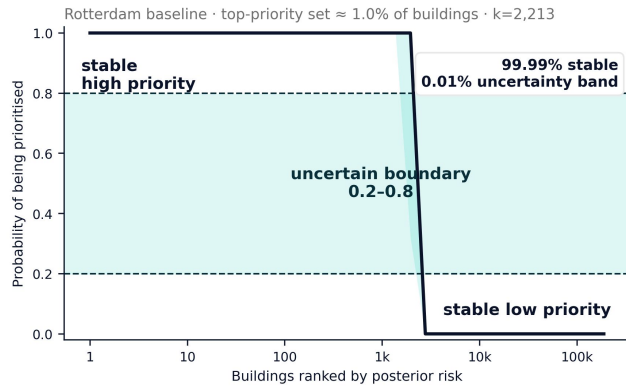


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1.0 -> high top-k membership probability
 0.5 -> the posterior cannot confidently decide
 0.0 -> high confidence that it is outside the top set

DECISION STABILITY STRUCTURE

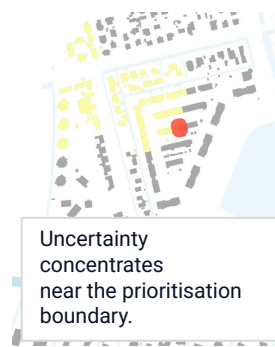


ZOOMED EXAMPLE ROTTERDAM

A. Consistently high-priority area



B. Boundary area (mixed uncertainty)

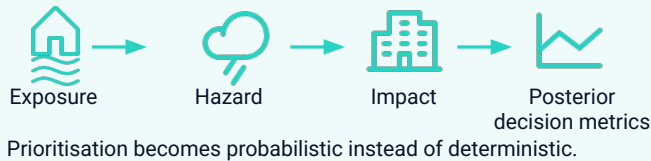


CROSS CITY TRANSFER

Same model, different cities



MODEL FRAMEWORK



WHAT THIS ENABLES

- Identify unstable intervention decisions
- Focus review on boundary cases
- Prioritise robust decisions

DECISION IMPLICATION

Focus review on the uncertain decision boundary



Paper & data
 habnetic.org



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