# NGF Pipeline: 12-Step Process

1. User provides a free-form task prompt (e.g., a reasoning or DeFi question).

2. Text is parsed and normalized: tokenized, cleaned, optionally mapped through an embedding model.

3. Encoder maps text into a latent vector representation in high-dimensional space.

4. Latent vector is projected into the NGF latent space, shaped for reasoning primitives.

5. Warp Module applies PCA/whitening, then warps the latent space into a single-well funnel landscape.

6. Detect Module runs matched filtering and null-calibrated thresholds to identify candidate wells.

7. Candidate latent trajectories are scored; the best match is isolated while phantoms are suppressed.

8. Denoise Module applies smoothing, inhibition, phantom guards, and jitter averaging for stability.

9. A stable geodesic trajectory is formed, converging deterministically to the well's minimum (Noetic Singularity).

10. Reasoning trace is assembled: the sequence of latent moves and intermediate decisions is recorded.

11. Trace is decoded back into structured output (symbolic reasoning steps, explanations, or decisions).

12. Final output is presented to the user with reasoning transparency, including optional stack trace visualization.