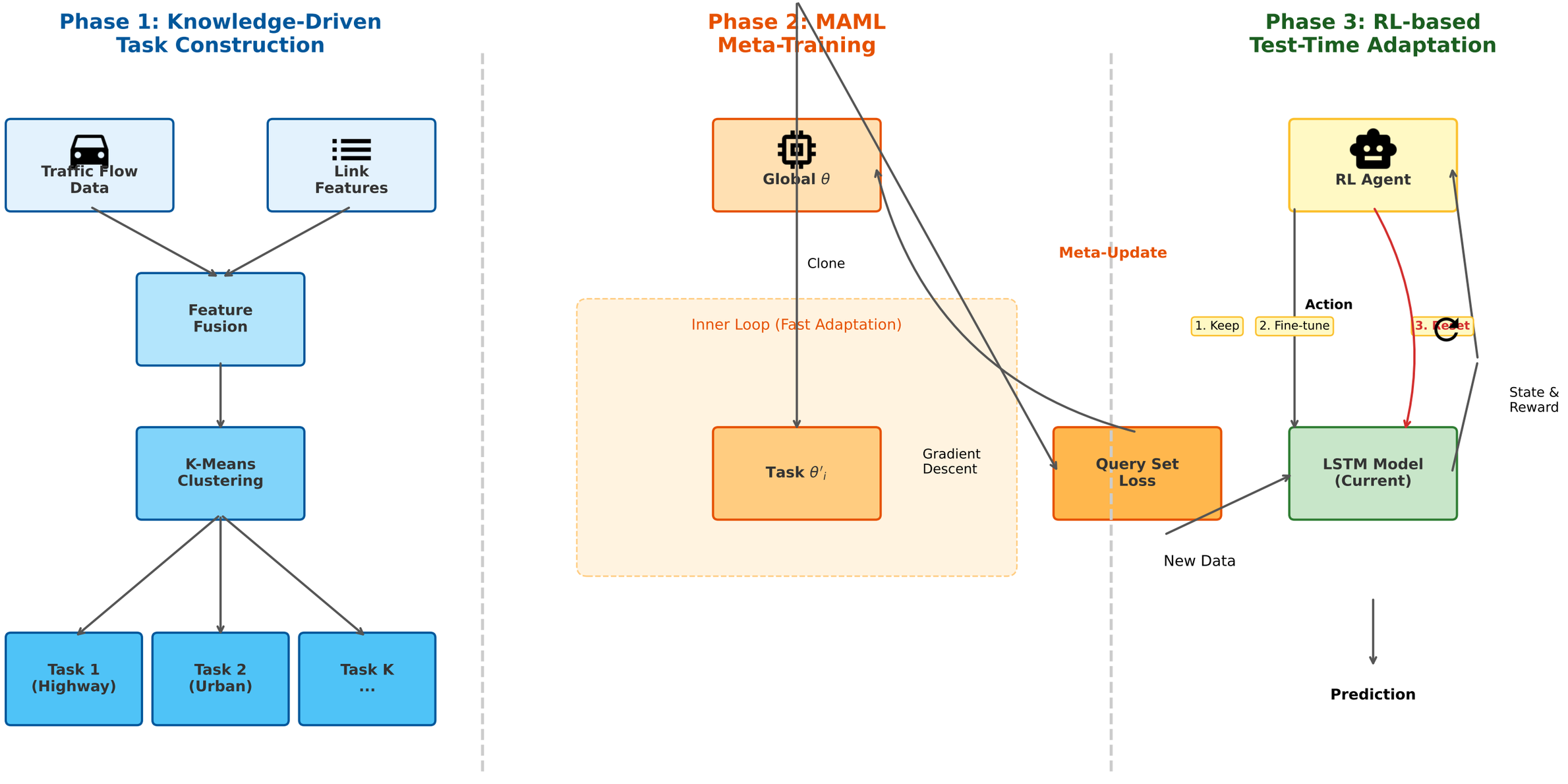
Phase 1: Knowledge-Driven Task Construction
Traffic Flow Data
Link Features
Feature Fusion
K-Means Clustering
Task 1 (Highway)
Task 2 (Urban)
Task K ...
Phase 2: MAML Meta-Training
Global θ
Clone
Inner Loop (Fast Adaptation)
Task θ'_i
Gradient Descent
Meta-Update
Query Set Loss
Phase 3: RL-based Test-Time Adaptation
RL Agent
Action
1. Keep
2. Fine-tune
3. Reset
State & Reward
LSTM Model (Current)
New Data
Prediction