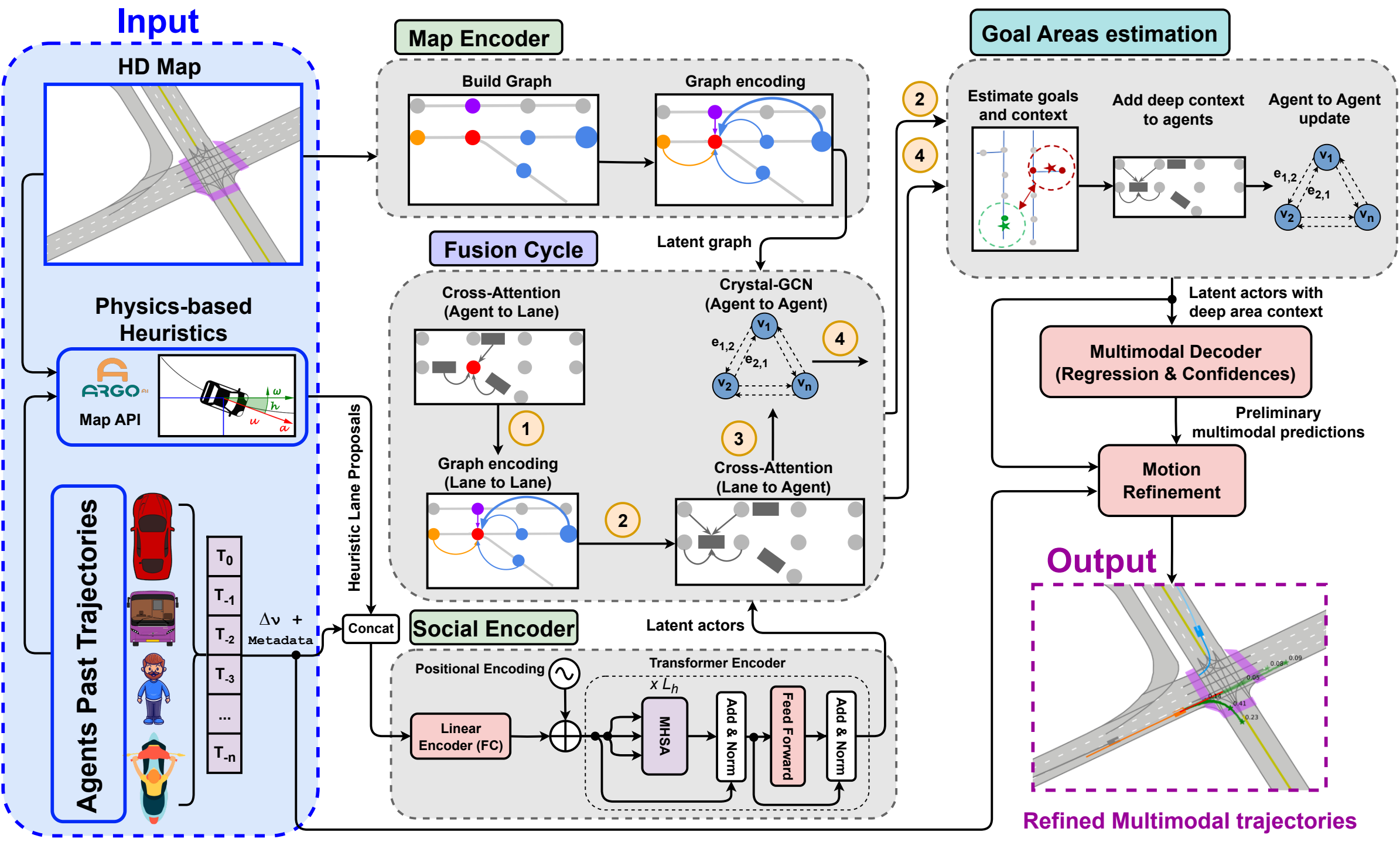
Input
HD Map
Physics-based Heuristics
Map API
Agents Past Trajectories
T_0
T_{-1}
T_{-2}
T_{-3}
...
T_{-n}
Δv + Metadata
Heuristic Lane Proposals
Concat
Map Encoder
Build Graph
Graph encoding
Latent graph
Fusion Cycle
Cross-Attention (Agent to Lane)
Graph encoding (Lane to Lane)
Cross-Attention (Lane to Agent)
Crystal-GCN (Agent to Agent)
1
2
3
4
Social Encoder
Positional Encoding
Linear Encoder (FC)
Transformer Encoder
x L_h
MHSA
Add & Norm
Feed Forward
Add & Norm
Latent actors
Goal Areas estimation
Estimate goals and context
Add deep context to agents
Agent to Agent update
Latent actors with deep area context
Multimodal Decoder (Regression & Confidences)
Preliminary multimodal predictions
Motion Refinement
Output
Refined Multimodal trajectories