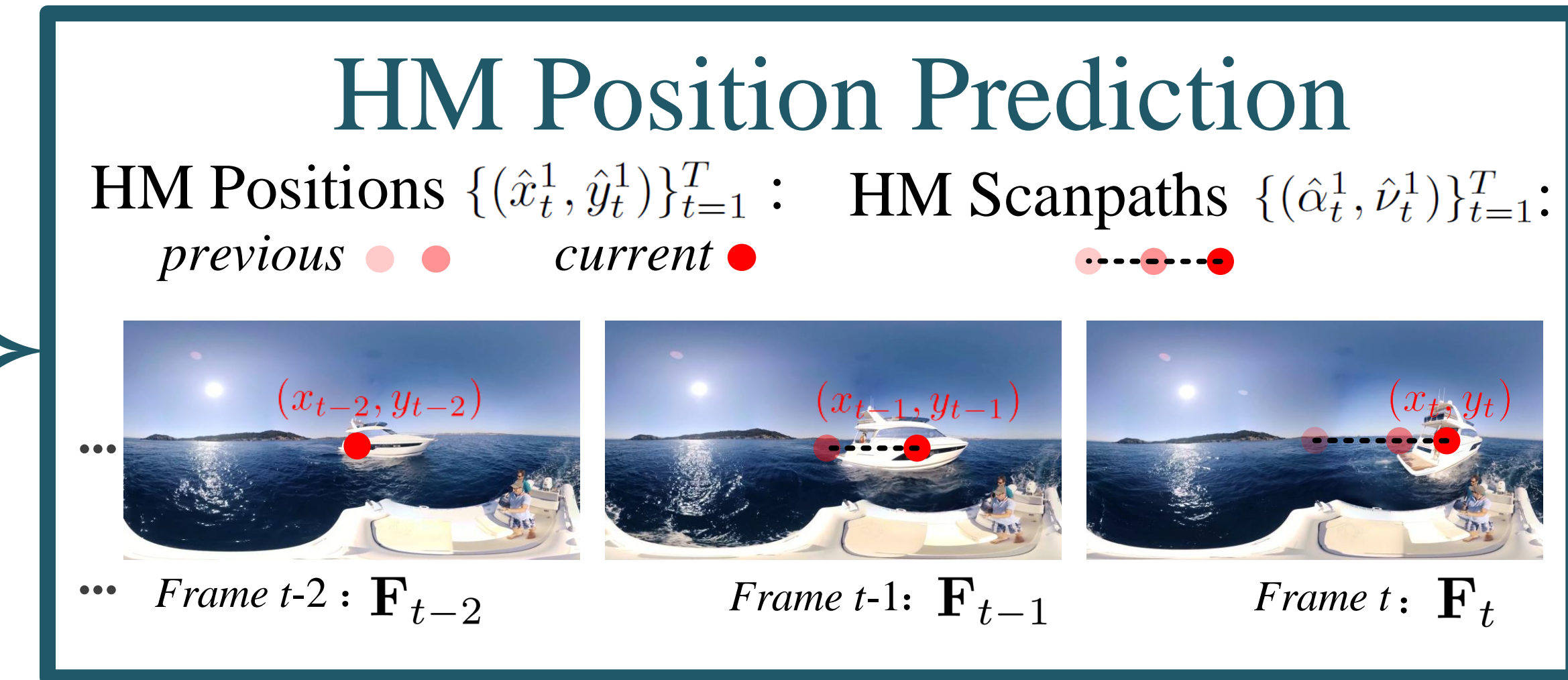
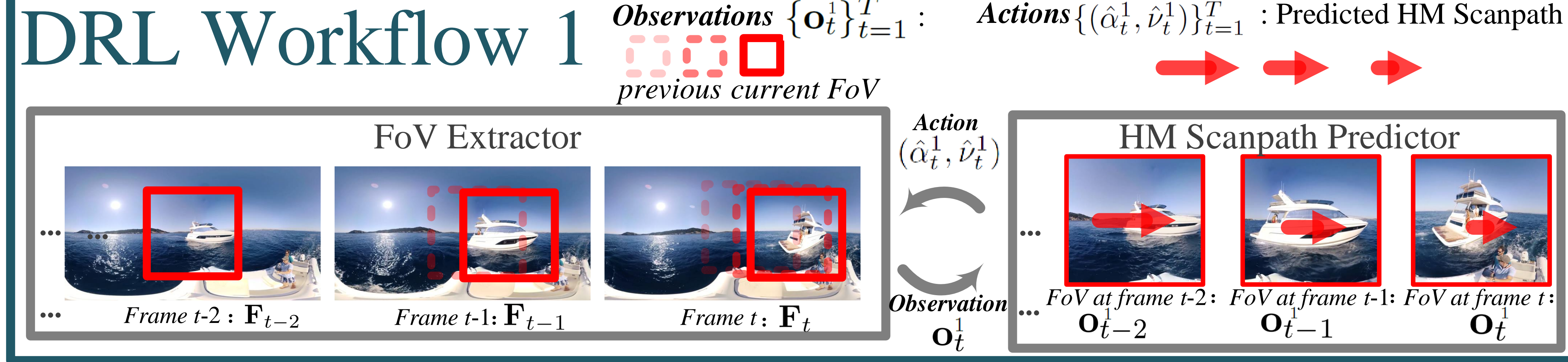
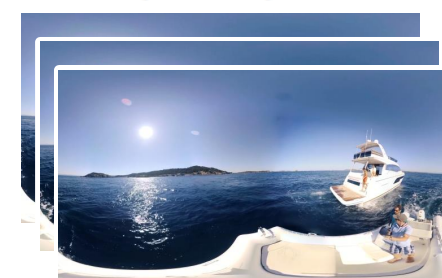
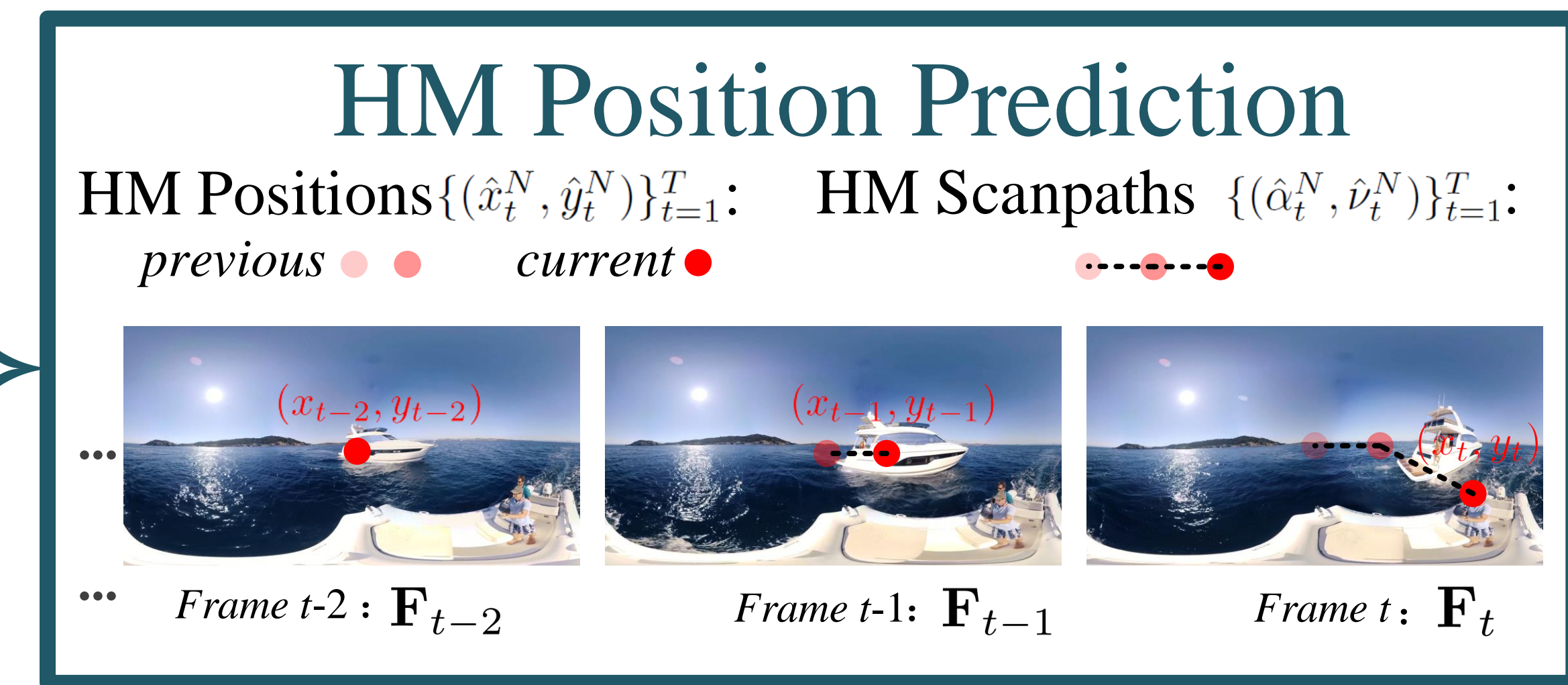
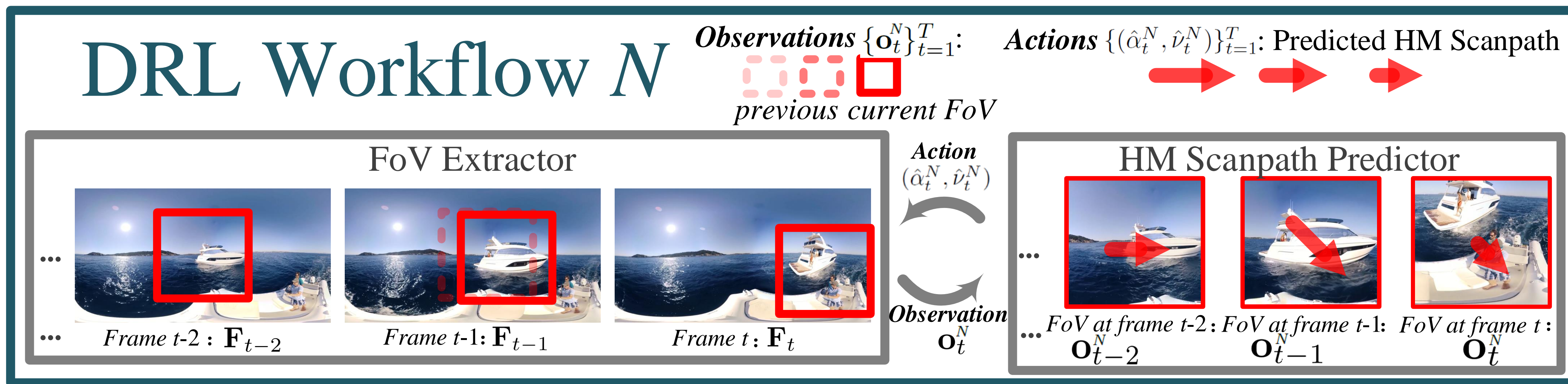
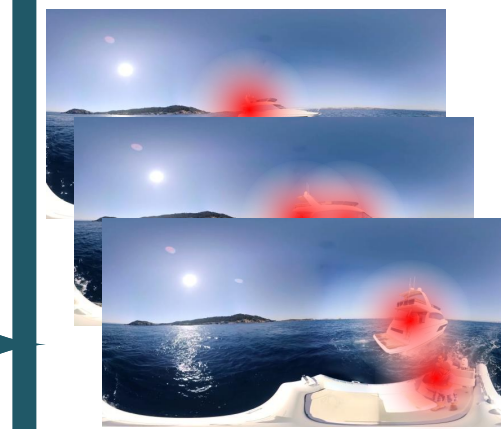


Input:

Panoramic Video
Frames $\{\mathbf{F}_t\}_{t=1}^T$



**HM Position
Integration &
Smoothing**



Output:

HM Maps \vdots
 \mathbf{H}_{t-2}
 \mathbf{H}_{t-1}
 \mathbf{H}_t
 \vdots