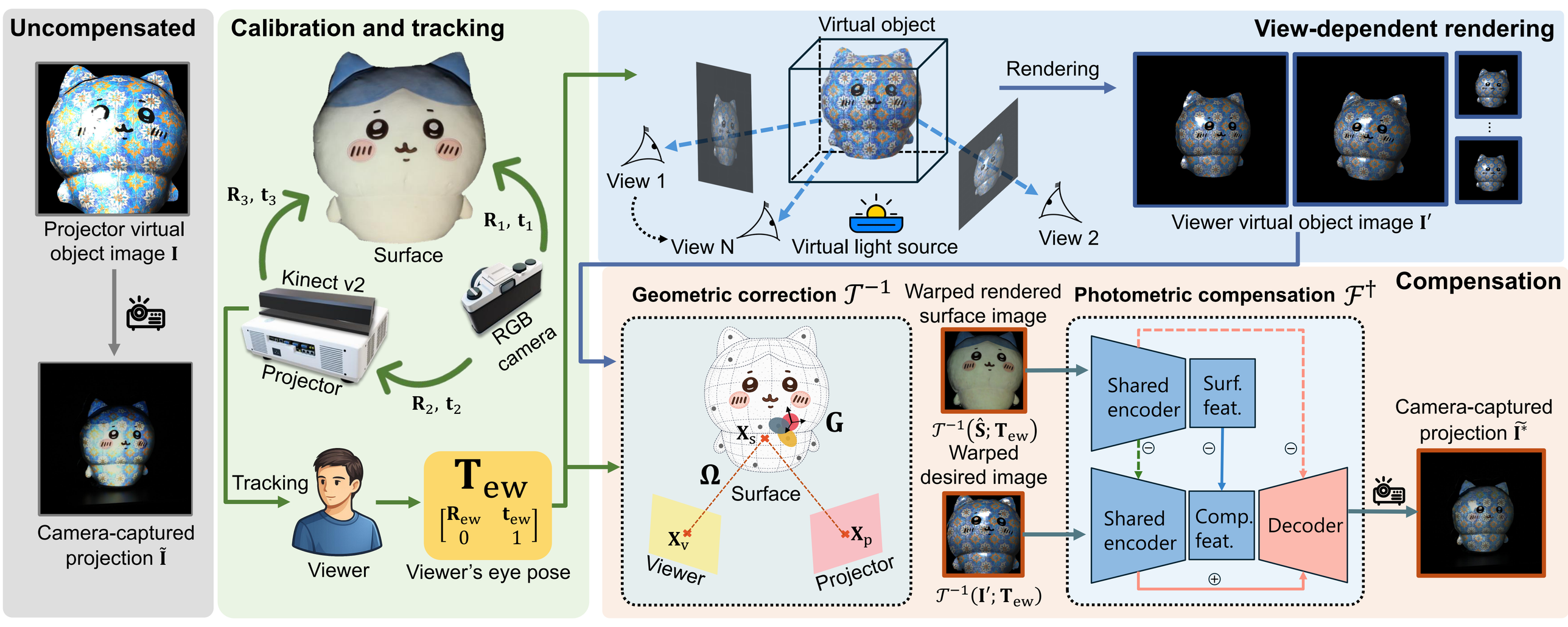

Uncompensated
Projector virtual object image $\mathbf{I}$
Camera-captured projection $\tilde{\mathbf{I}}$
Calibration and tracking
$\mathbf{R}_3, \mathbf{t}_3$
$\mathbf{R}_1, \mathbf{t}_1$
Surface
Kinect v2
RGB camera
Projector
$\mathbf{R}_2, \mathbf{t}_2$
Tracking
Viewer
$\mathbf{T}_{ew} = \begin{bmatrix} \mathbf{R}_{ew} & \mathbf{t}_{ew} \\ 0 & 1 \end{bmatrix}$
Viewer's eye pose
Virtual object
View 1
View N
Virtual light source
View 2
Rendering
View-dependent rendering
Viewer virtual object image $\mathbf{I}'$
Compensation
Geometric correction $\mathcal{T}^{-1}$
$\mathbf{G}$
$\mathbf{X}_s$
$\boldsymbol{\Omega}$
Surface
$\mathbf{X}_v$
Viewer
$\mathbf{X}_p$
Projector
Warped rendered surface image
$\mathcal{T}^{-1}(\hat{\mathbf{S}}; \mathbf{T}_{ew})$
Warped desired image
$\mathcal{T}^{-1}(\mathbf{I}'; \mathbf{T}_{ew})$
Photometric compensation $\mathcal{F}^{\dagger}$
Shared encoder
Surf. feat.
Shared encoder
Comp. feat.
Decoder
Camera-captured projection $\tilde{\mathbf{I}}^*$