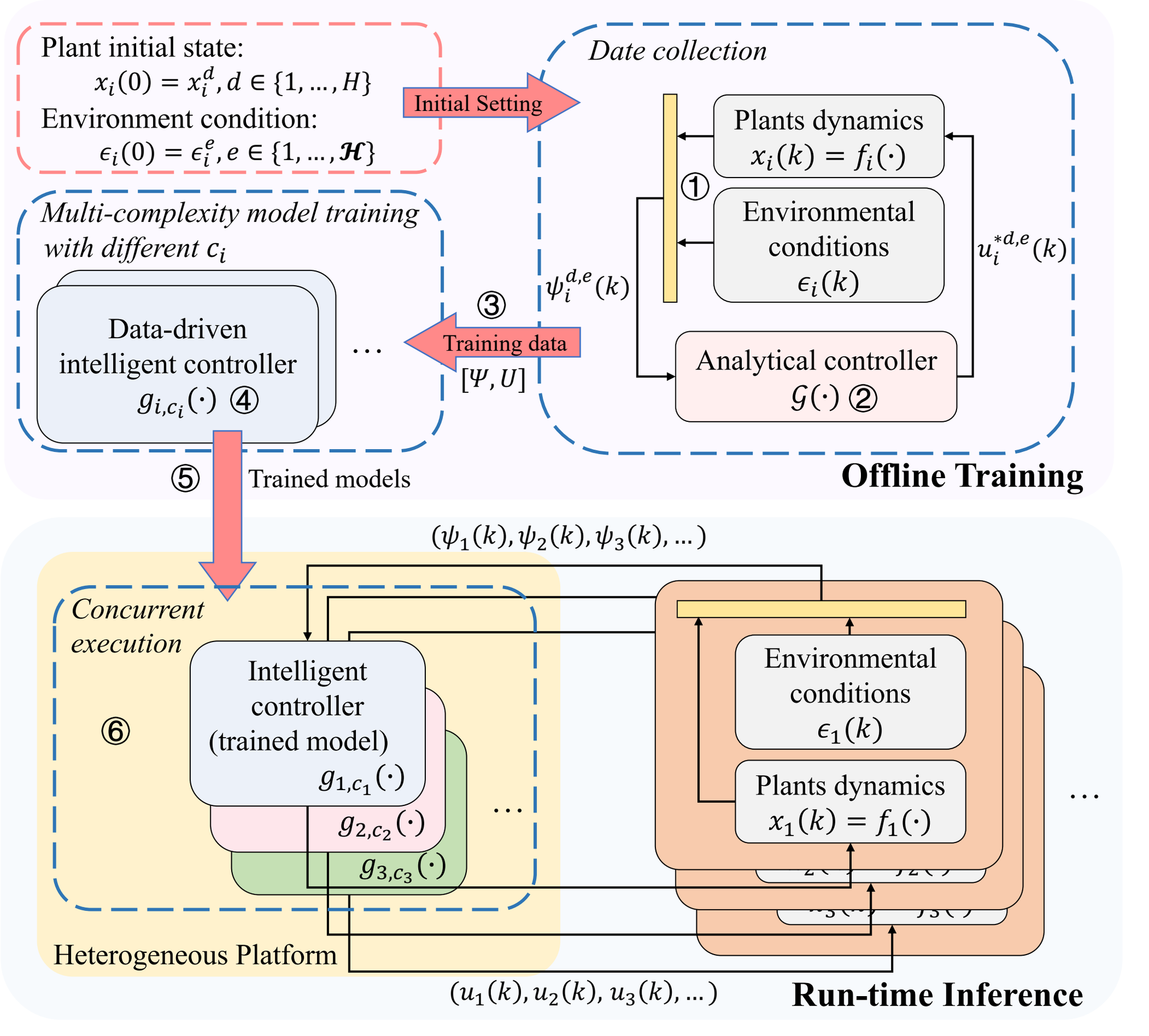
Plant initial state:
$x_i(0) = x_i^d, d \in \{1, \dots, H\}$
Environment condition:
$\epsilon_i(0) = \epsilon_i^e, e \in \{1, \dots, \mathcal{H}\}$
Initial Setting
Date collection
Plants dynamics
$x_i(k) = f_i(\cdot)$
①
Environmental conditions
$\epsilon_i(k)$
$u_i^{*d,e}(k)$
$\psi_i^{d,e}(k)$
③
Training data
$[\Psi, U]$
Analytical controller
$\mathcal{G}(\cdot)$ ②
Multi-complexity model training with different c_i
Data-driven intelligent controller
$g_{i,c_i}(\cdot)$ ④
…
⑤
Trained models
Offline Training
$(\psi_1(k), \psi_2(k), \psi_3(k), \dots)$
Concurrent execution
⑥
Intelligent controller (trained model)
$g_{1,c_1}(\cdot)$
$g_{2,c_2}(\cdot)$
$g_{3,c_3}(\cdot)$
…
Environmental conditions
$\epsilon_1(k)$
Plants dynamics
$x_1(k) = f_1(\cdot)$
…
Heterogeneous Platform
$(u_1(k), u_2(k), u_3(k), \dots)$
Run-time Inference