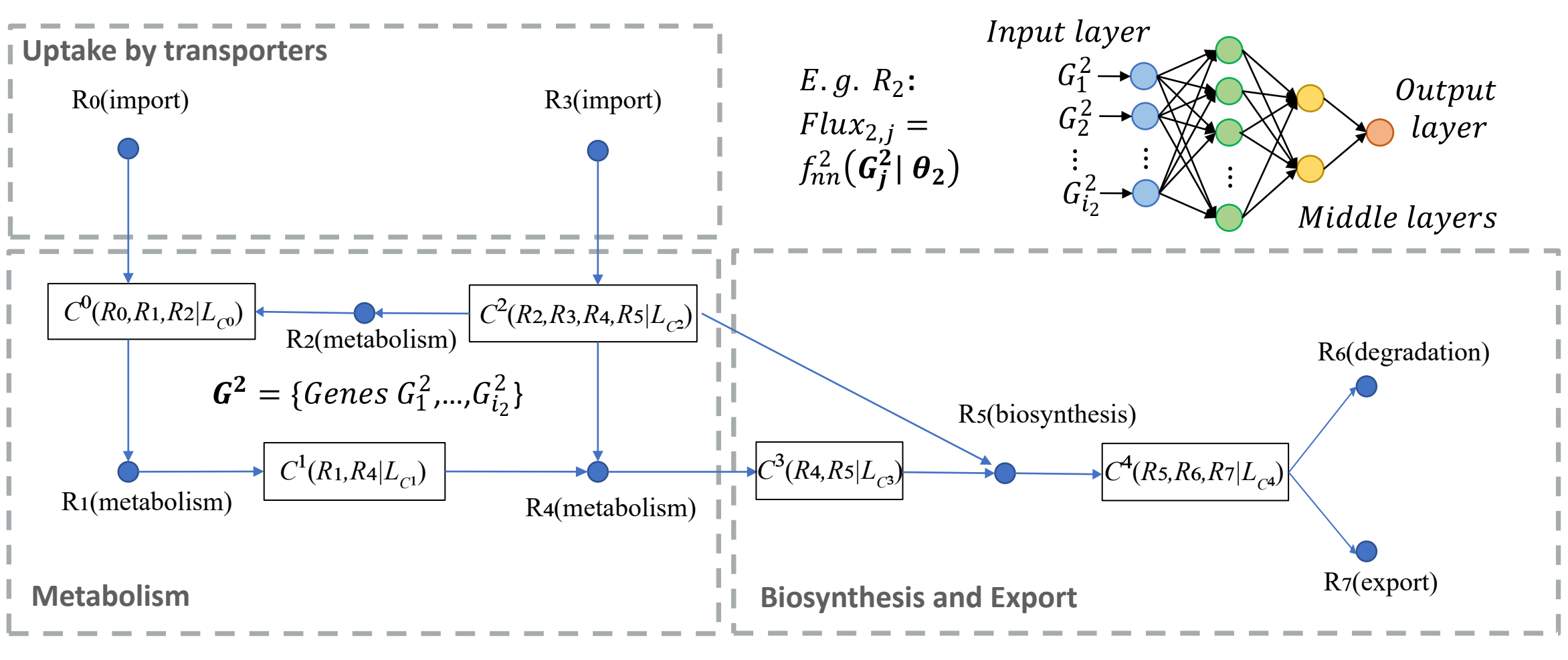
Uptake by transporters
R0(import)
R3(import)
$E.g.\ R_2$:
$Flux_{2,j} = f_{nn}^{2}(\boldsymbol{G_j^2} | \boldsymbol{\theta_2})$
Input layer
G_1^2
G_2^2
$G_{i_2}^2$
Output layer
Middle layers
$C^0(R0,R1,R2|L_{C0})$
R2(metabolism)
$C^2(R2,R3,R4,R5|L_{C2})$
$\boldsymbol{G^2} = \{Genes\ G_1^2,...,G_{i_2}^2\}$
$C^1(R1,R4|L_{C1})$
R1(metabolism)
R4(metabolism)
Metabolism
$C^3(R4,R5|L_{C3})$
R5(biosynthesis)
$C^4(R5,R6,R7|L_{C4})$
R6(degradation)
R7(export)
Biosynthesis and Export