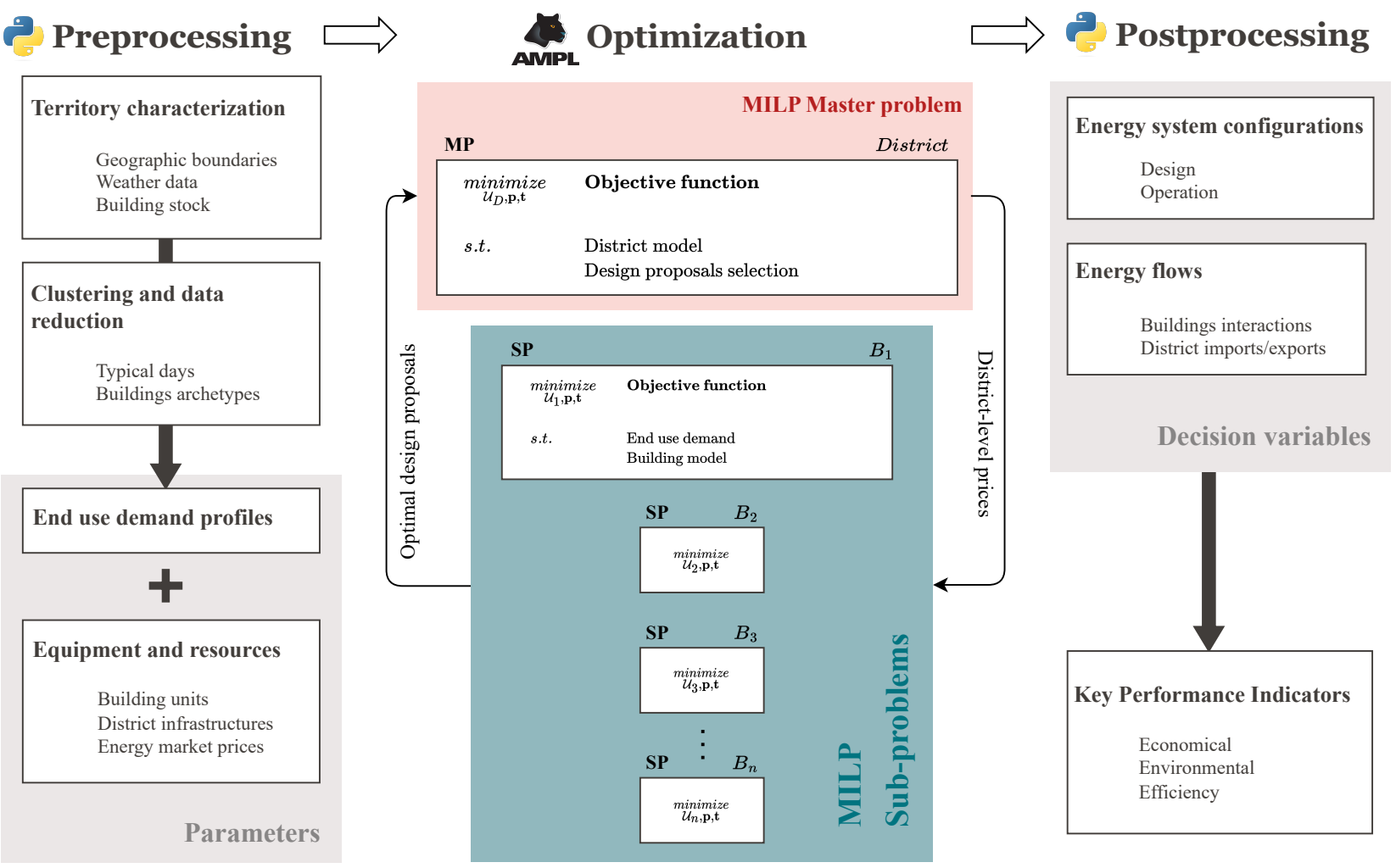
Preprocessing
Optimization
Postprocessing
Territory characterization
Geographic boundaries
Weather data
Building stock
Clustering and data reduction
Typical days
Buildings archetypes
End use demand profiles
Equipment and resources
Building units
District infrastructures
Energy market prices
Parameters
MILP Master problem
MP
District
minimize $u_{D,\mathbf{p},\mathbf{t}}$
Objective function
s.t.
District model
Design proposals selection
Optimal design proposals
District-level prices
SP
B_1
minimize $u_{1,\mathbf{p},\mathbf{t}}$
Objective function
s.t.
End use demand
Building model
SP
B_2
minimize $u_{2,\mathbf{p},\mathbf{t}}$
SP
B_3
minimize $u_{3,\mathbf{p},\mathbf{t}}$
SP
B_n
minimize $u_{n,\mathbf{p},\mathbf{t}}$
MILP Sub-problems
Energy system configurations
Design
Operation
Energy flows
Buildings interactions
District imports/exports
Decision variables
Key Performance Indicators
Economical
Environmental
Efficiency