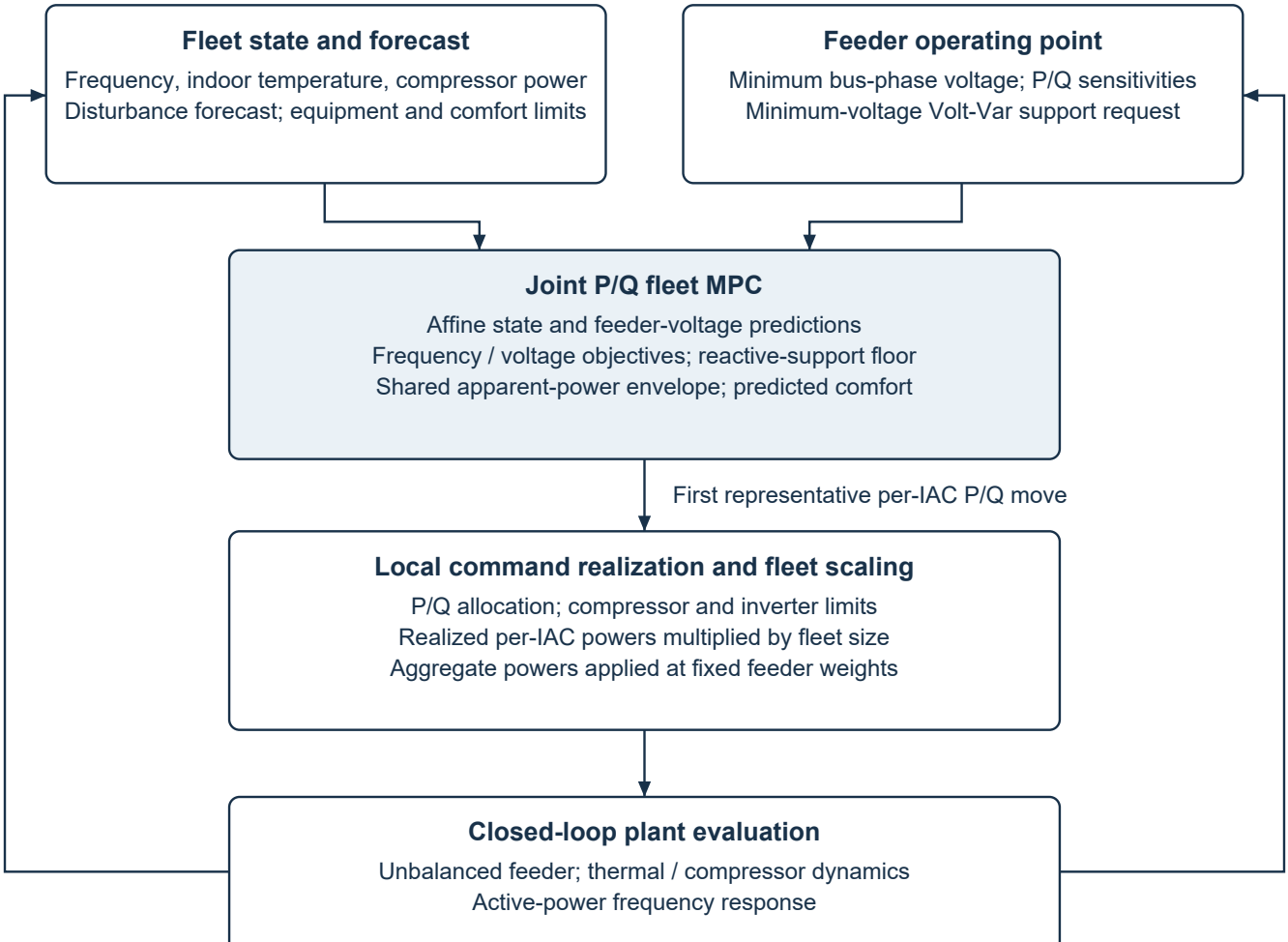

Fleet state and forecast
Frequency, indoor temperature, compressor power
Disturbance forecast; equipment and comfort limits
Feeder operating point
Minimum bus-phase voltage; P/Q sensitivities
Minimum-voltage Volt-Var support request
Joint P/Q fleet MPC
Affine state and feeder-voltage predictions
Frequency / voltage objectives; reactive-support floor
Shared apparent-power envelope; predicted comfort
First representative per-IAC P/Q move
Local command realization and fleet scaling
P/Q allocation; compressor and inverter limits
Realized per-IAC powers multiplied by fleet size
Aggregate powers applied at fixed feeder weights
Closed-loop plant evaluation
Unbalanced feeder; thermal / compressor dynamics
Active-power frequency response