# Repeat for scenarios and iterations

#### Simulation setup

Get case arguments given scenario ID

get caseval

Validate input models, copy folders, and rename files; copy bias-adjusted .ctl file if needed verify input, copy ss3models

### Operating model

Replace recruitment deviations

change\_recdevs

Replace F, M, selectivity, and growth values in .par file change\_f, change\_m, change\_sel, change\_growth

Run the OM

run ss3model

Copy new .dat file to the EM folder

## Survey and composition sampling

Sample the survey index, fishery index, age composition, and length composition data with observation error; write to EM .dat file change index, change agecomp, change lcomp

Manipulate the EM starter file for retrospective analysis change\_retro

#### **Estimation model**

Change options in the EM; add forecasting if needed change e

Run the FM

run ss3model

Find bias-adjustment factor if needed run bias ss3