Initial state and initial mesh

- Stress balance (velocity field update)
- Mass balance (surface and thickness update)

Time: $t_0 = 0$

Adaptive mesh refinement (mesh update)

- Grounding line migration (basal friction update)
- Ice front migration (front boundary condition update)

Time increment: $t_{n+1} = t_n + dt$

- Calculate elements distance to the grounding line
- Calculate ZZ error estimators
- Refine/coarsen elements
- Adjust solutions on the new mesh

Time: $t_0 = 0$