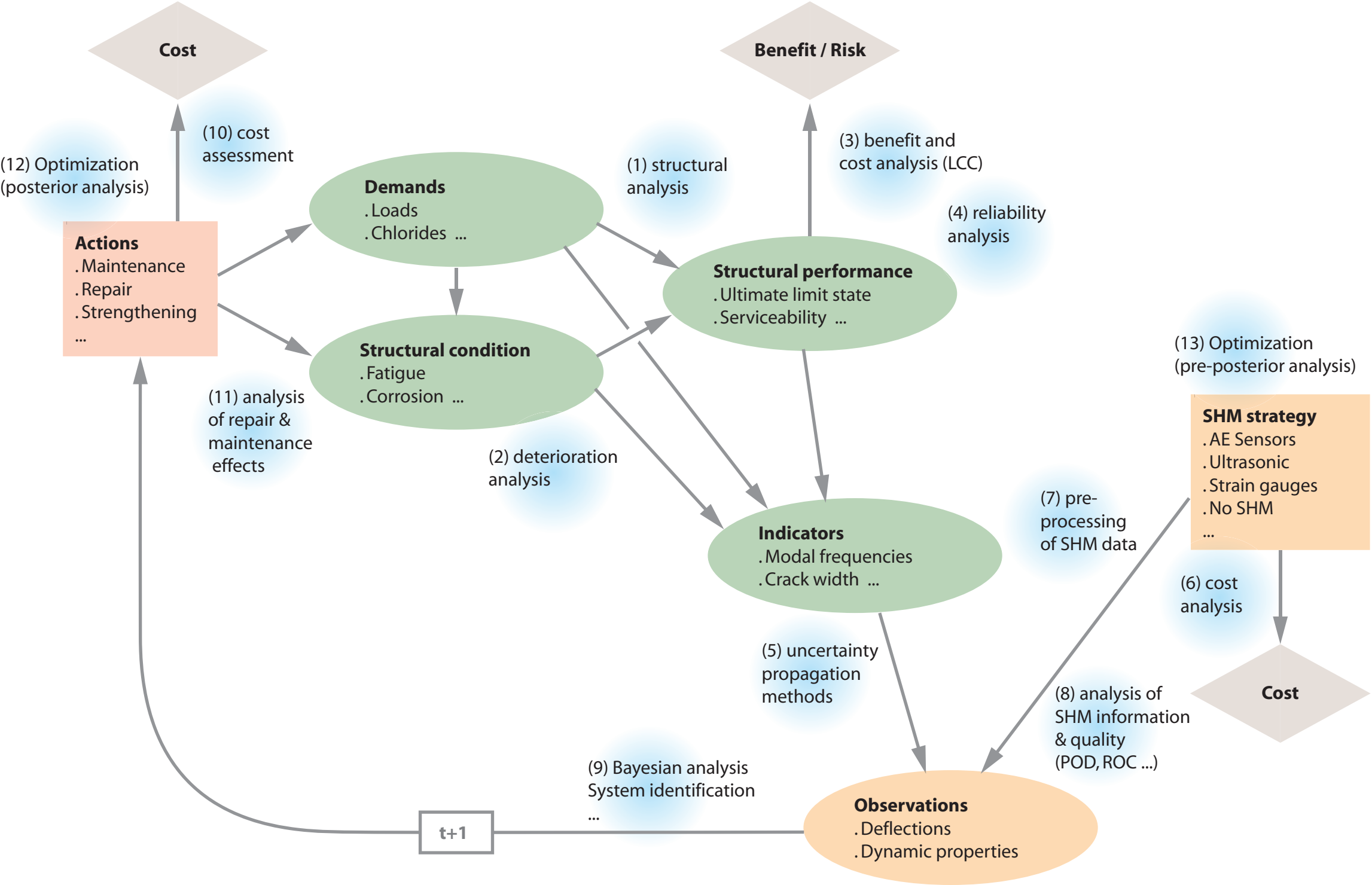
Cost
Benefit / Risk
(10) cost assessment
(12) Optimization (posterior analysis)
(1) structural analysis
(3) benefit and cost analysis (LCC)
(4) reliability analysis
Demands
. Loads
. Chlorides ...
Actions
. Maintenance
. Repair
. Strengthening
...
Structural performance
. Ultimate limit state
. Serviceability ...
Structural condition
. Fatigue
. Corrosion ...
(13) Optimization (pre-posterior analysis)
(11) analysis of repair & maintenance effects
(2) deterioration analysis
SHM strategy
. AE Sensors
. Ultrasonic
. Strain gauges
. No SHM
...
(7) pre-processing of SHM data
Indicators
. Modal frequencies
. Crack width ...
(6) cost analysis
(5) uncertainty propagation methods
Cost
(8) analysis of SHM information & quality (POD, ROC ...)
(9) Bayesian analysis System identification ...
t+1
Observations
. Deflections
. Dynamic properties