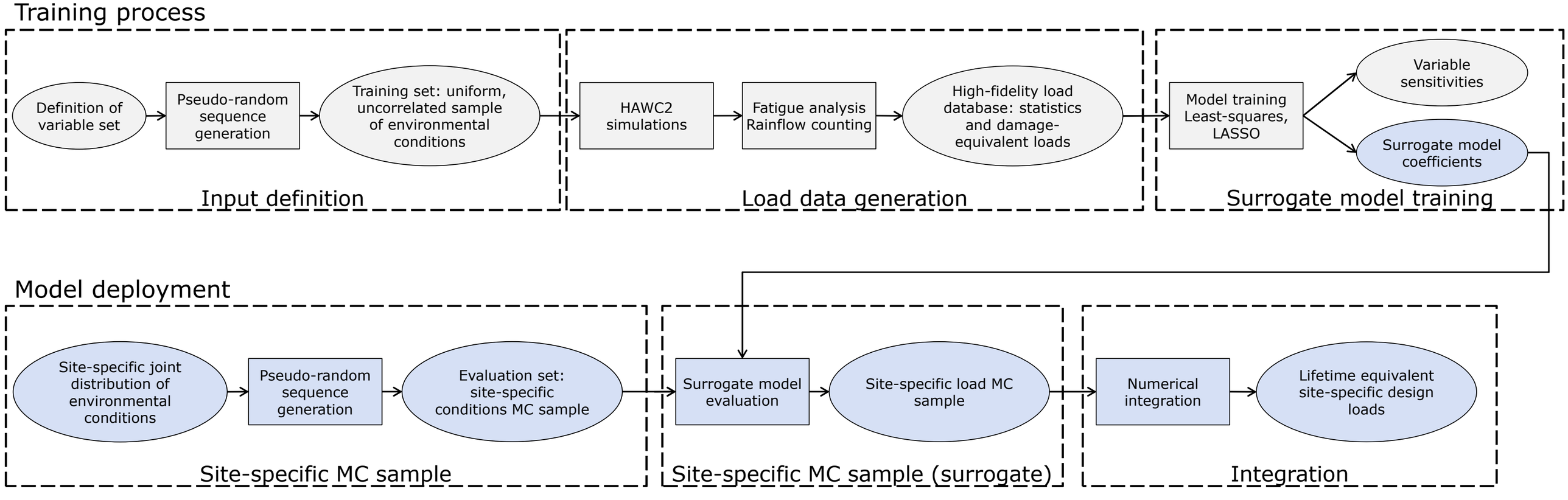
Training process
Definition of variable set
Pseudo-random sequence generation
Training set: uniform, uncorrelated sample of environmental conditions
Input definition
HAWC2 simulations
Fatigue analysis Rainflow counting
High-fidelity load database: statistics and damage-equivalent loads
Load data generation
Model training Least-squares, LASSO
Variable sensitivities
Surrogate model coefficients
Surrogate model training
Model deployment
Site-specific joint distribution of environmental conditions
Pseudo-random sequence generation
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Site-specific MC sample
Surrogate model evaluation
Site-specific load MC sample
Site-specific MC sample (surrogate)
Numerical integration
Lifetime equivalent site-specific design loads
Integration