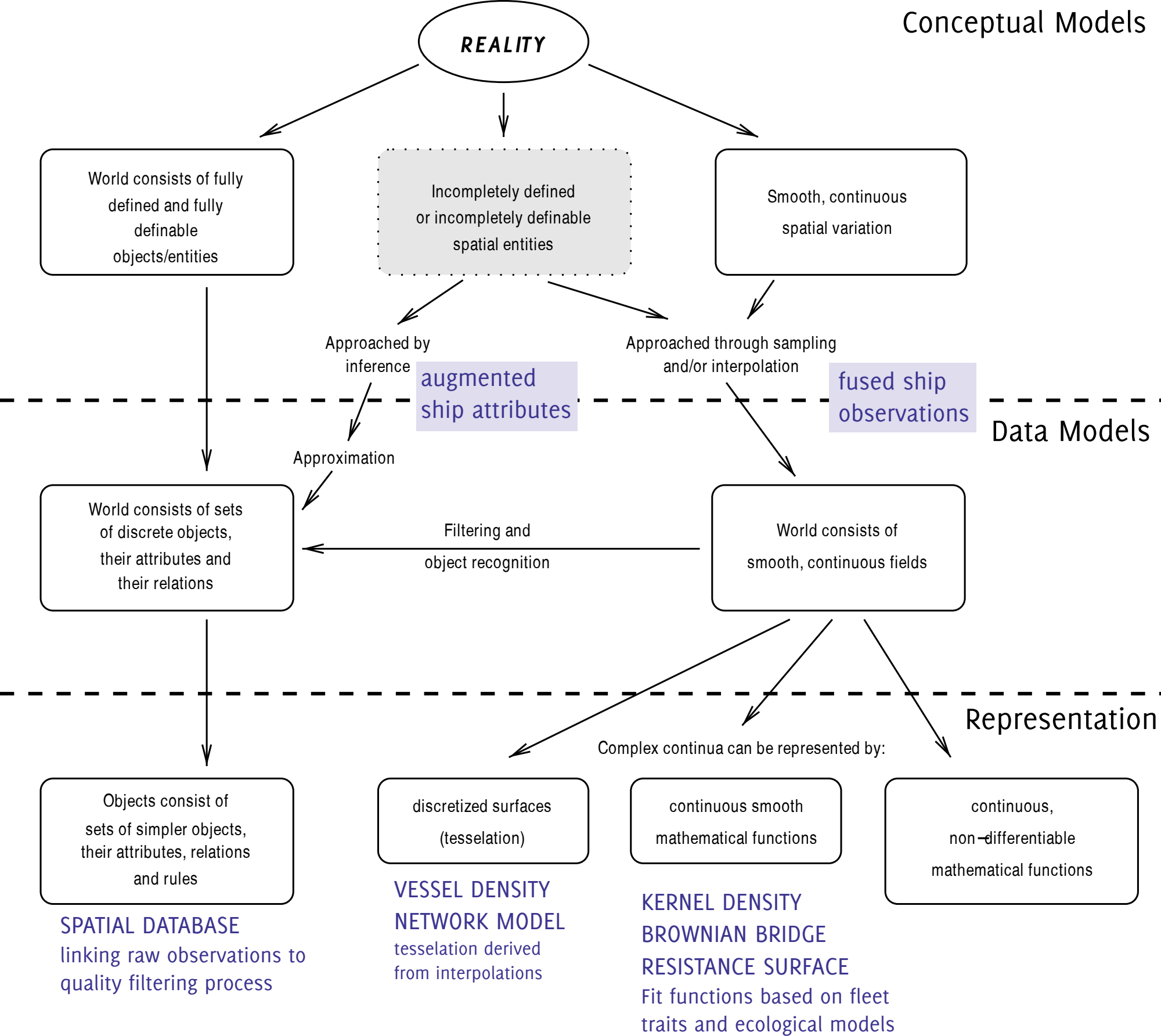
Conceptual Models
REALITY
World consists of fully defined and fully definable objects/entities
Incompletely defined or incompletely definable spatial entities
Smooth, continuous spatial variation
Approached by inference
Approached through sampling and/or interpolation
augmented ship attributes
fused ship observations
Data Models
Approximation
World consists of sets of discrete objects, their attributes and their relations
Filtering and object recognition
World consists of smooth, continuous fields
Representation
Complex continua can be represented by:
Objects consist of sets of simpler objects, their attributes, relations and rules
discretized surfaces (tesselation)
continuous smooth mathematical functions
continuous, non-differentiable mathematical functions
SPATIAL DATABASE
linking raw observations to quality filtering process
VESSEL DENSITY NETWORK MODEL
tesselation derived from interpolations
KERNEL DENSITY
BROWNIAN BRIDGE
RESISTANCE SURFACE
Fit functions based on fleet traits and ecological models