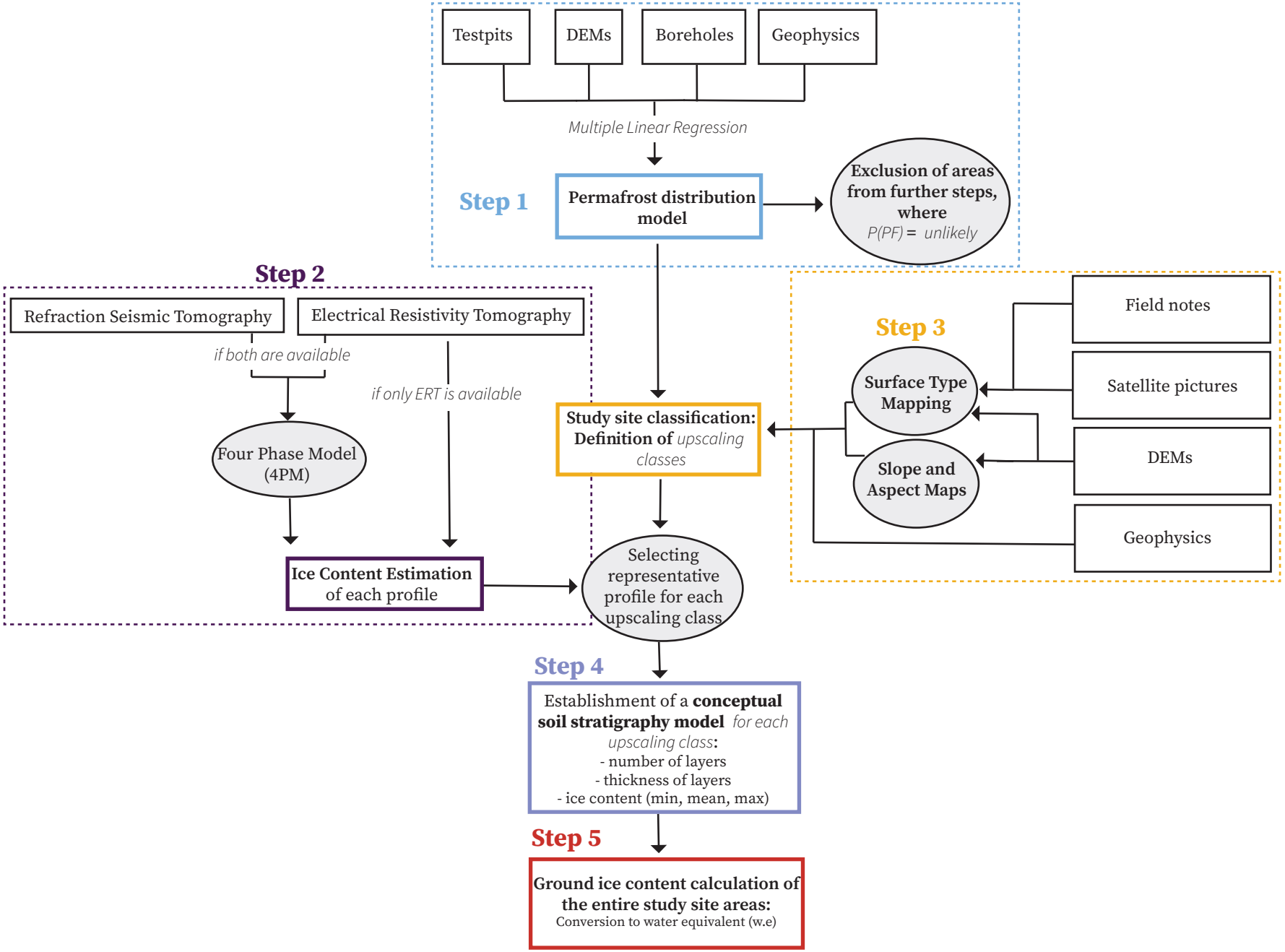
Testpits
DEMs
Boreholes
Geophysics
Multiple Linear Regression
Step 1
Permafrost distribution model
Exclusion of areas from further steps, where
P(PF) = unlikely
Step 2
Refraction Seismic Tomography
Electrical Resistivity Tomography
if both are available
if only ERT is available
Four Phase Model (4PM)
Ice Content Estimation of each profile
Study site classification: Definition of upscaling classes
Selecting representative profile for each upscaling class
Step 3
Field notes
Satellite pictures
DEMs
Geophysics
Surface Type Mapping
Slope and Aspect Maps
Step 4
Establishment of a conceptual soil stratigraphy model for each upscaling class:
- number of layers
- thickness of layers
- ice content (min, mean, max)
Step 5
Ground ice content calculation of the entire study site areas:
Conversion to water equivalent (w.e)