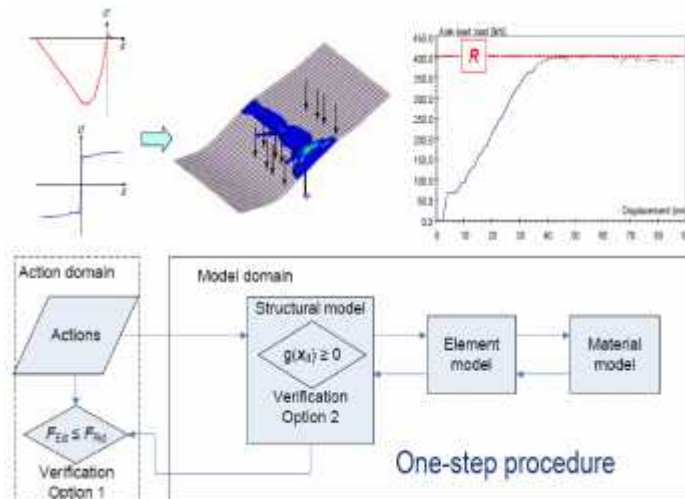


Assessment



Most often than not non-linear



Two models

Assessment

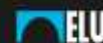
- Understand the phenomenon
- Understand the structure
- Elements and material models
- Careful with assumptions

Design

- Load transfer mechanisms
- What effects you want to model
- How will you use the results

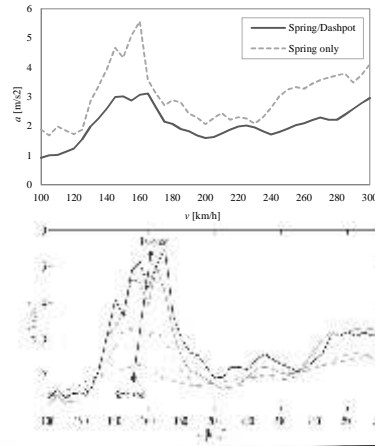
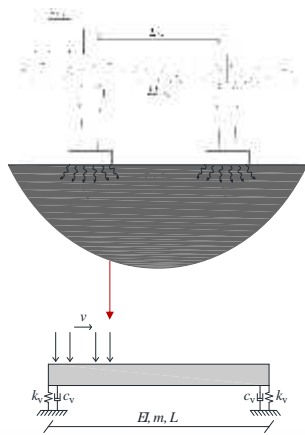


Think about the entire procedure



Response to high speed trains

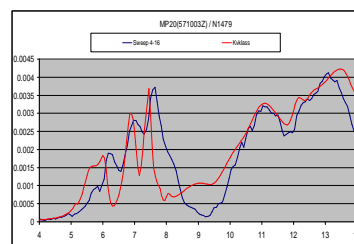
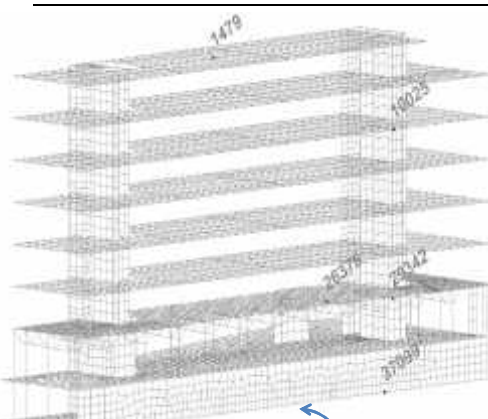
Influence of soil-structure interaction



Understand the phenomenon



Vibration control



Base model

- Soil-structure interaction
- Interaction between parts
- Extent of the model

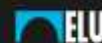
Vibrations - train traffic

Model update

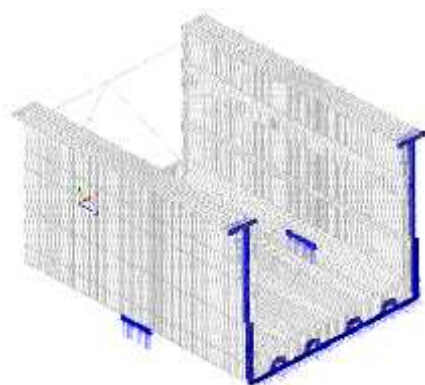
- Parameter choice (2ⁿ factorial)
- Updating algorithms

NOTE: Dependent to a high degree on the base model

Understand the phenomenon

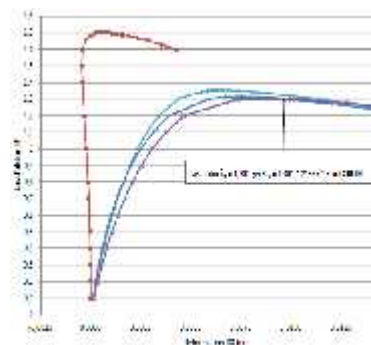


Stability analysis



Imperfections

- Geometrical
- Mechanical – initial stresses



Understand the phenomenon

