Software Evolution Techniques

visualizatio

metrics

UML

evolving
software system

testing

refactoring
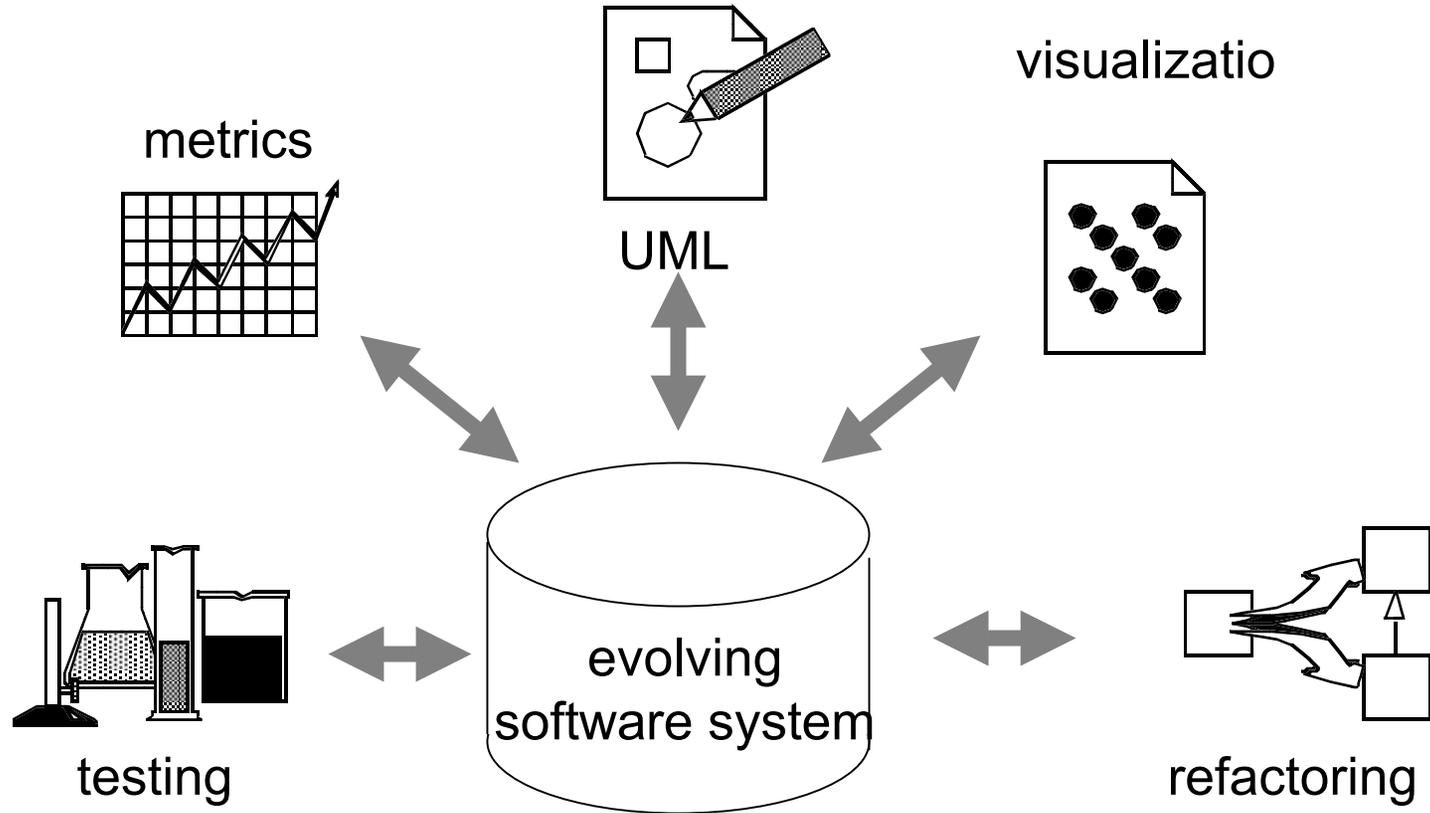
Which techniques do complement each other ?

Research Method

Empirical Survey   **Case Study**

- reliable results ☺   - lightweight

- time and effort ☹   - credibility

Agree on a representative set of case-studies
=> BENCHMARK

Characteristics	Case studies	• Toy Example (LAN -Simulation)	• Industrial System (VisualWorks & Swing)	• Public Domain (HotDraw & ET++)	• Open-source (Mozilla)
• Life Cycle (analysis, design, ...)					
• Evolution (scale, #iterations, ...)					
• Domain (problem, solution, ...)					

Discussion

- Does it makes sense to define a benchmark ?
  - Would you use it ?   o yes   o no

- Are the characteristics complete / minimal ?
  - Improvements ? (other benchmarks ?)

- Are the cases representative ?
  - Other cases ? (analysis, non-oo, embedded/distributed)

- Are the cases replicable ?

  re the cases replicable ?