

- ❗ **Threat** Wrong problem
- ✅ **Validate** Observe and interview target users

❗ **Threat** Wrong task/data abstraction

❗ **Threat** Ineffective encoding/interaction idiom

✅ **Validate** Justify encoding/interaction design

❗ **Threat** Slow algorithm

✅ **Validate** Analyze computational complexity

Implement system

✅ **Validate** Measure system time/memory

✅ **Validate** Qualitative/quantitative result image analysis

Test on any users, informal usability study

✅ **Validate** Lab study, measure human time/errors for task

✅ **Validate** Test on target users, collect anecdotal evidence of utility

✅ **Validate** Field study, document human usage of deployed system

✅ **Validate** Observe adoption rates