

Traceability

In Agile Projects

Traceability in Agile Projects - Jane Cleland-Huang

Estimating the implementation risk of requirements in agile software development projects with traceability metrics - Patrick Rempel & Patrick Mäder

Requirements Engineering 2
Fredrik Johnson and Sarah Holmstedt

Agenda

- Introduction to traceability
- The Agile Manifesto & traceability in agile processes
- Traceability Information Model (TIM)
- Traceability Metrics
- Conclusions

Traceability

- Thoughts concerning traceability
 - heavyweight
 - burdensome
 - little value

Large, distributed and safety-critical projects

Benefits outweigh the costs

No “one-size-fits all”

The Agile Manifesto

Set of fundamental philosophies

12 principles founded in 2001

Work closely with customers

Contains principles

Principle 1: “Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.”

Principle 2: “Welcome changing requirements, even late in development. Agile processes harness change for the customer’s competitive advantage.”

Traceability in Agile processes

Agile processes

- Value-added increment

- Early verification of requirements

Workflow

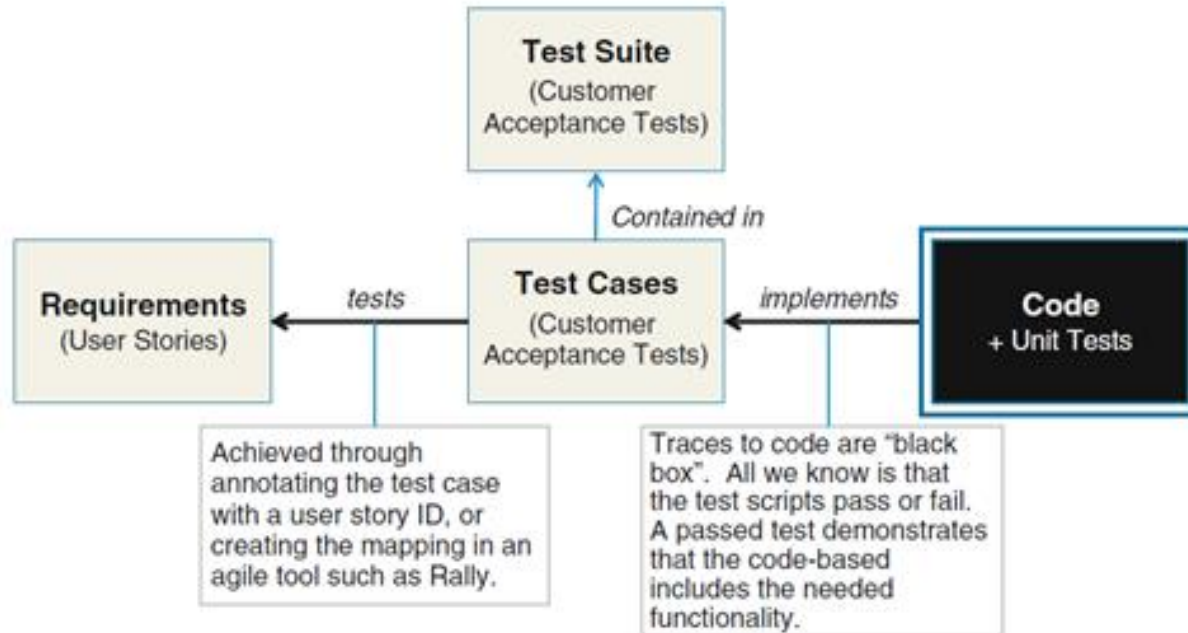
- Requirements are prioritized

- Traceability to prioritize

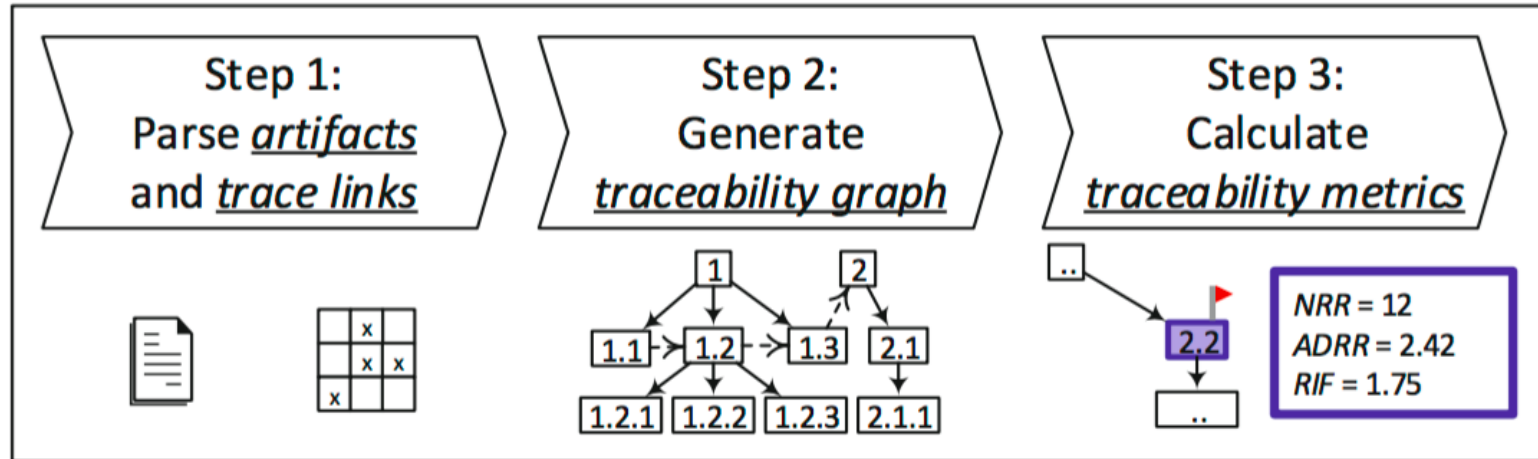
- Traceability metrics

- Traceability information model

Traceability Information Model (TIM)



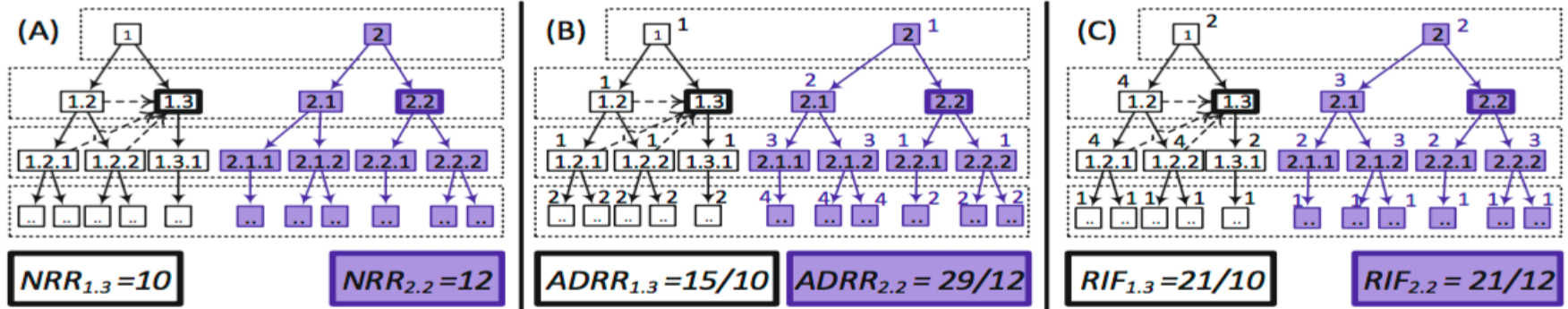
Traceability metrics: Data Collection



Traceability metrics

Relationships between requirements

NRR, ADRR and RIF



Use of traceability metrics

Study of five industry-scale agile projects

CONNECT, Infinispan, jBPM, Weld and Wildfly

Implementation risk of requirement

Support requirement prioritization

Conclusions

- No “one-size-fits all”
- Benefits of trace in agile projects:
 - Product conformance
 - Baseline reproducibility
 - Organizational learning

Usefulness