

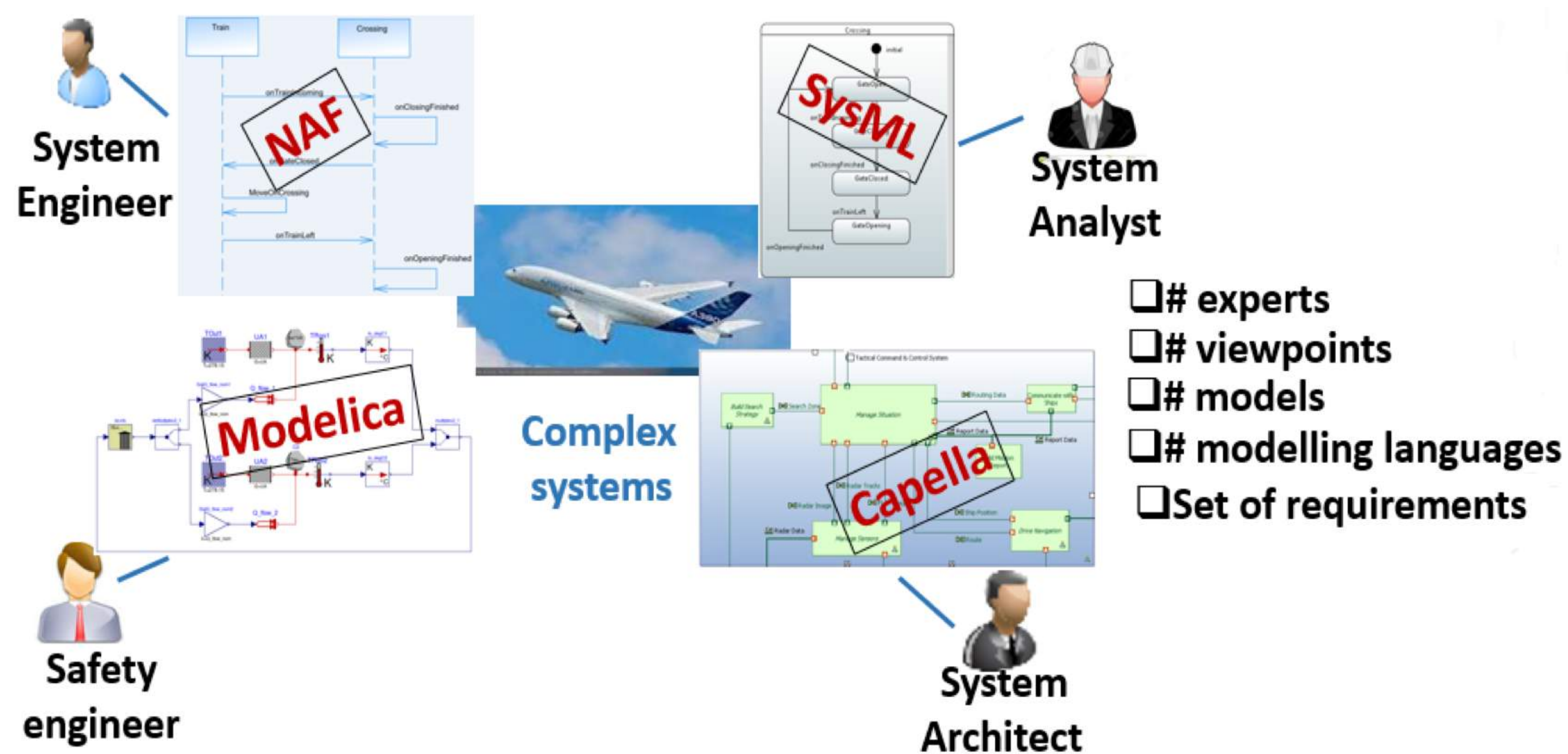
Reconciliation of Change in the Context of Heterogeneous Models

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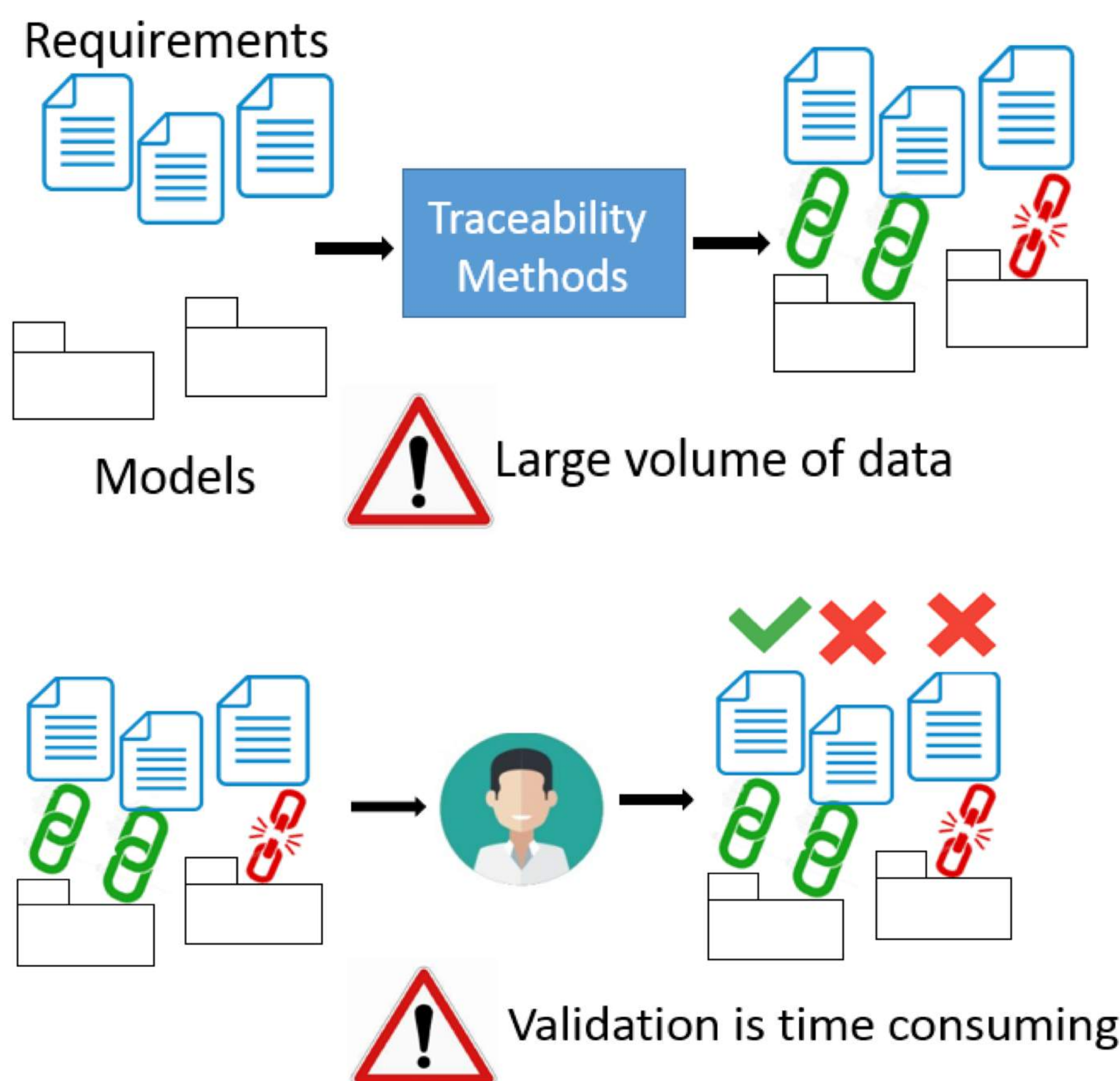
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1. CONTEXT



- ❖ Large volume of data: 300000 requirements for A380.
- ❖ Requirements and models evolve constantly.
- ❖ Requirements and models are build with heterogeneous modelling languages.

2. CHALLENGES

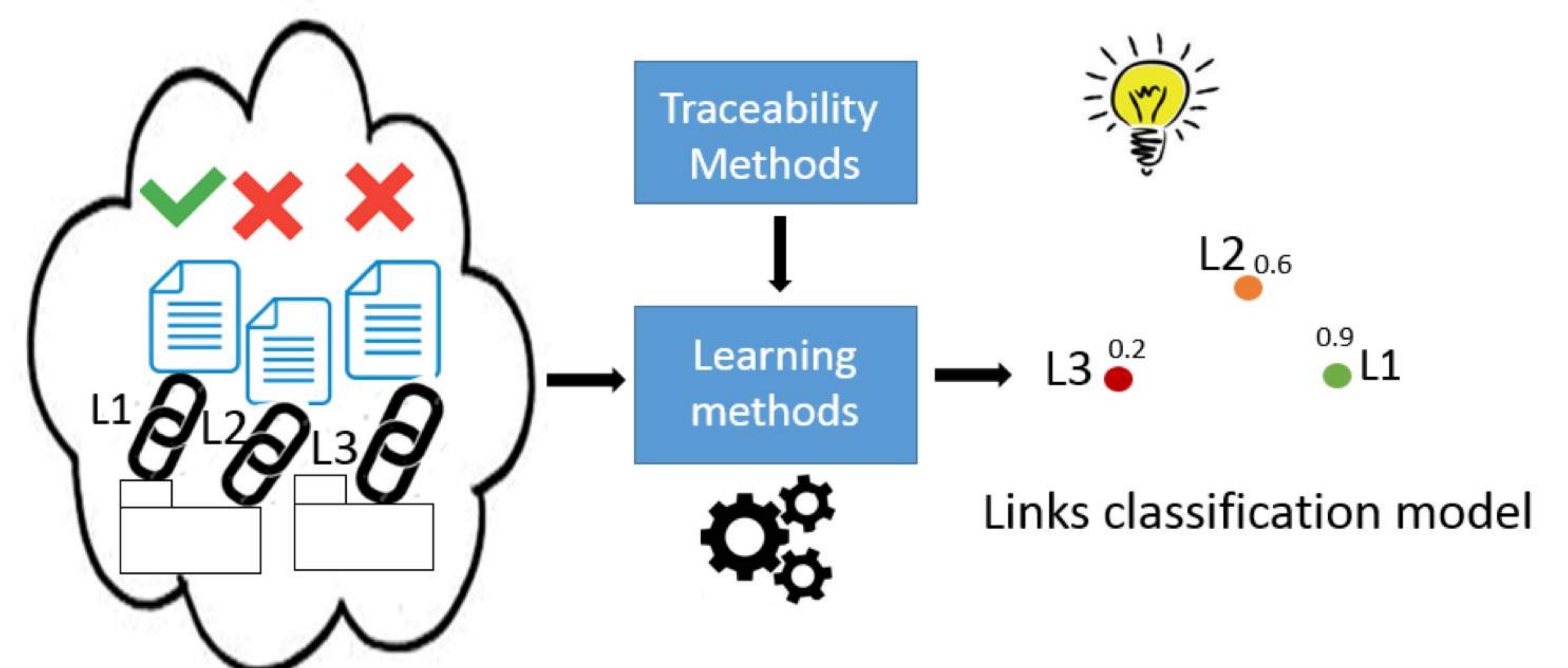


Can we learn a discriminative model of traceability links?

3. OBJECTIVES

- ❖ Trace links are generally created among requirements, design, source code, test cases and other artifacts.
- ❖ Automated approaches tend to deliver imprecise and inaccurate results.
- ❖ In other to improve automated approaches, we are learning a discriminative model of traceability links.
- ❖ We also need to maintain the validated links during the project lifecycle.

4. PROPOSITION



True and false links examples

The approach aimed at learning a discriminative model of traceability links (i.e characterize true and false links). To do so we use complementary traceability methods and the confident value attribute to all links define its class (true or false).

5. FUTURE WORK

- Identification of implicit links:
 - ✓ Formalize the implicit and potential need of stakeholders.
- Maintenance of validated links:
 - ✓ Impact analysis.
 - ✓ Cost estimate of a change.

REFERENCES

1. Ghabi, Achraf, and Alexander Egyed. "Exploiting traceability uncertainty among artifacts and code." *Journal of Systems and Software* 108 (2015): 178-192.
2. Niu, Nan, et al. "Departures from optimality: understanding human analyst's information foraging in assisted requirements tracing." *Proceedings of the 2013 International Conference on Software Engineering*. IEEE Press, 2013.

