



Towards Interoperable Standards

The openETCS Approach

supported by:



Federal Ministry
of Education
and Research



Région de
Bruxelles-
Capitale



openETCS@ITEA2 Project

Dr. Stefan Rieger

Berlin, 24/09/2014

From Standard to Implementation

Standard

Goal: Interoperability

defines

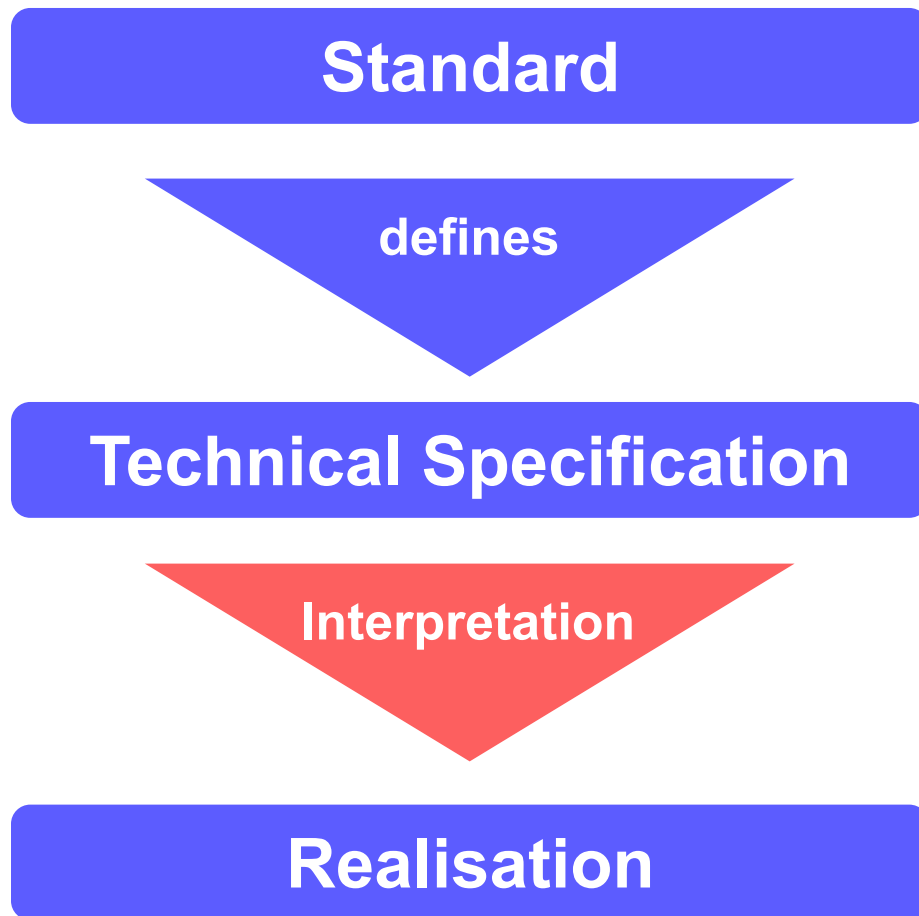
Technical Specification

Goal: Define realisation

Interpretation

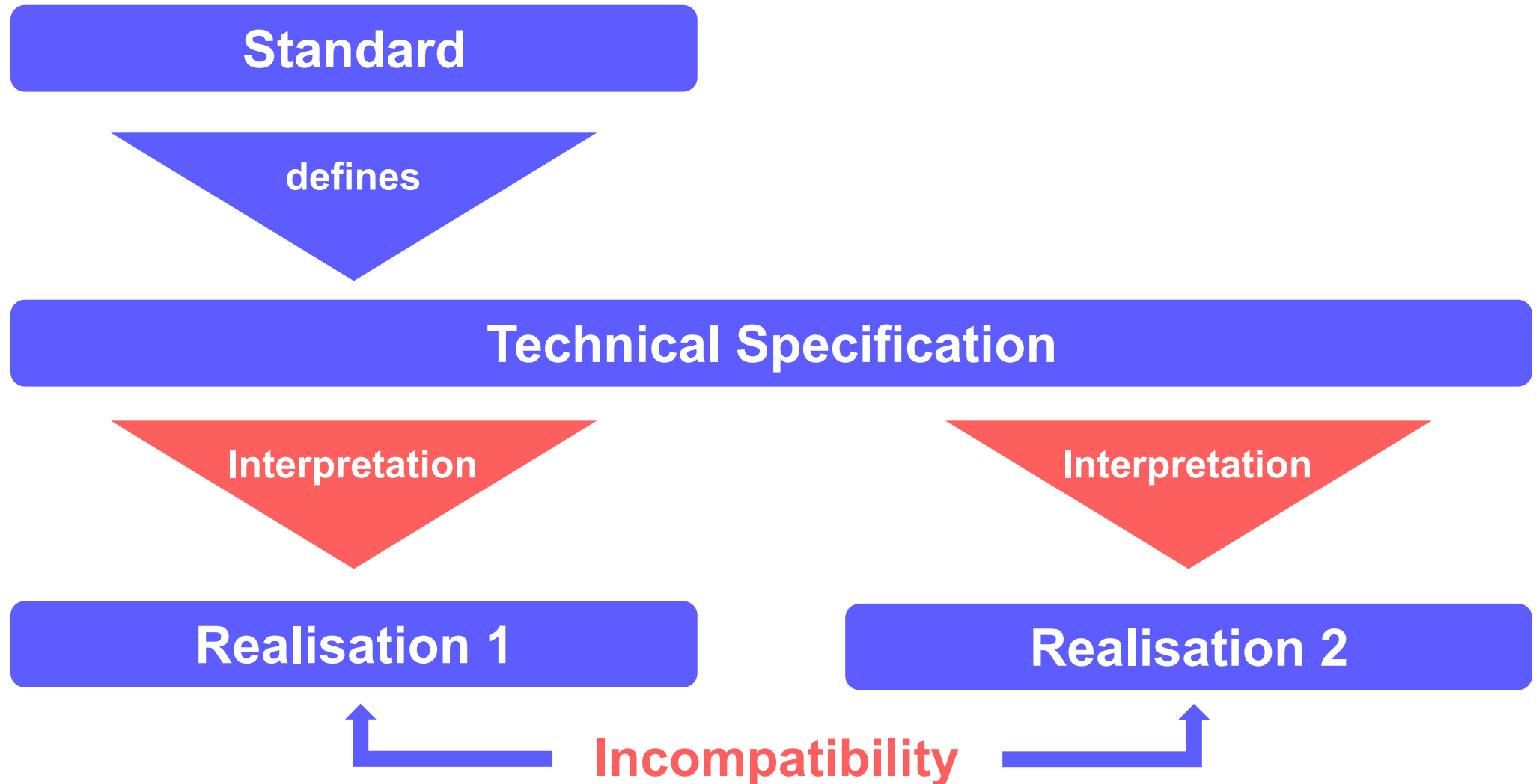
Realisation

From Standard to Implementation

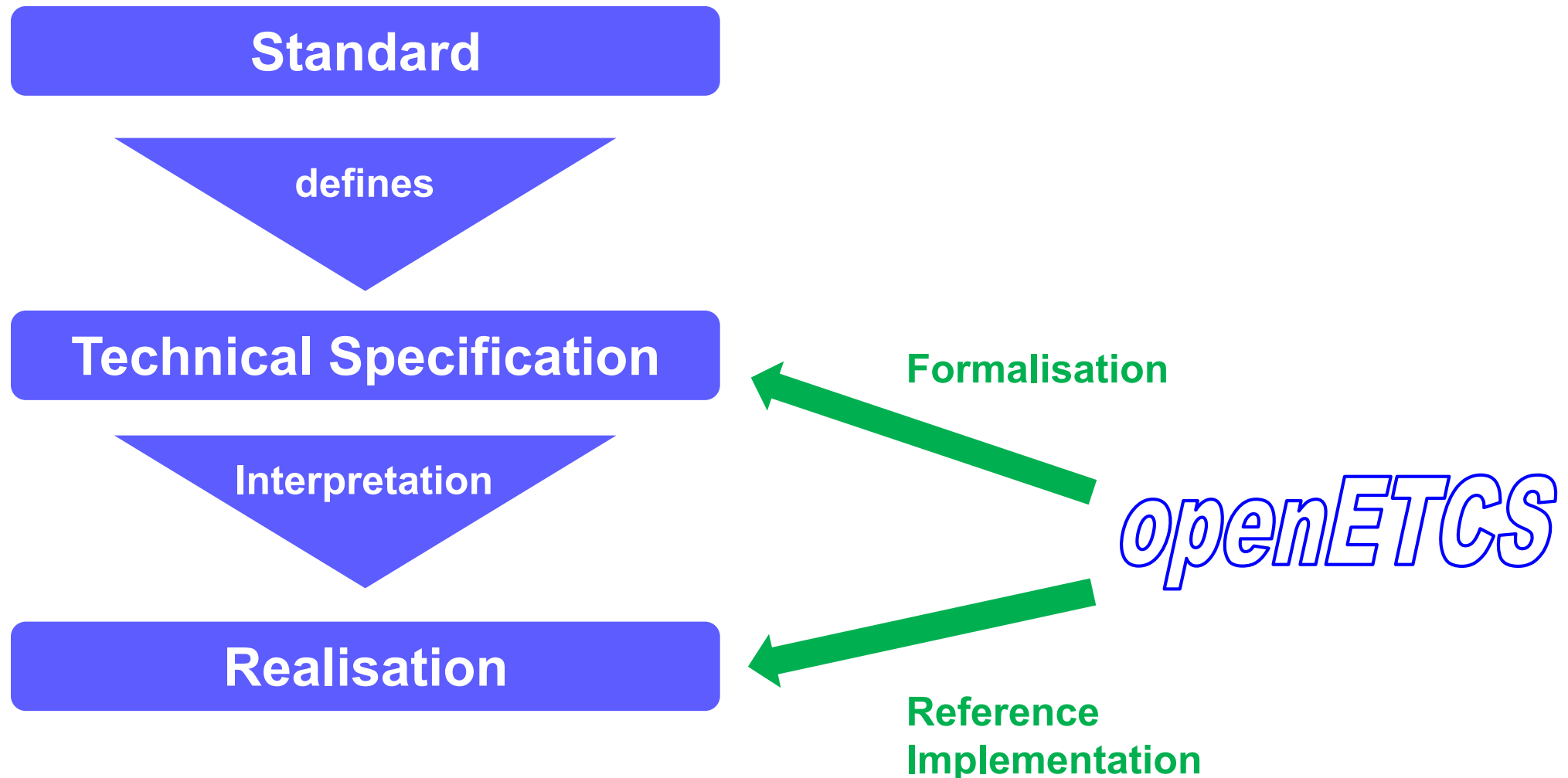


Natural Language

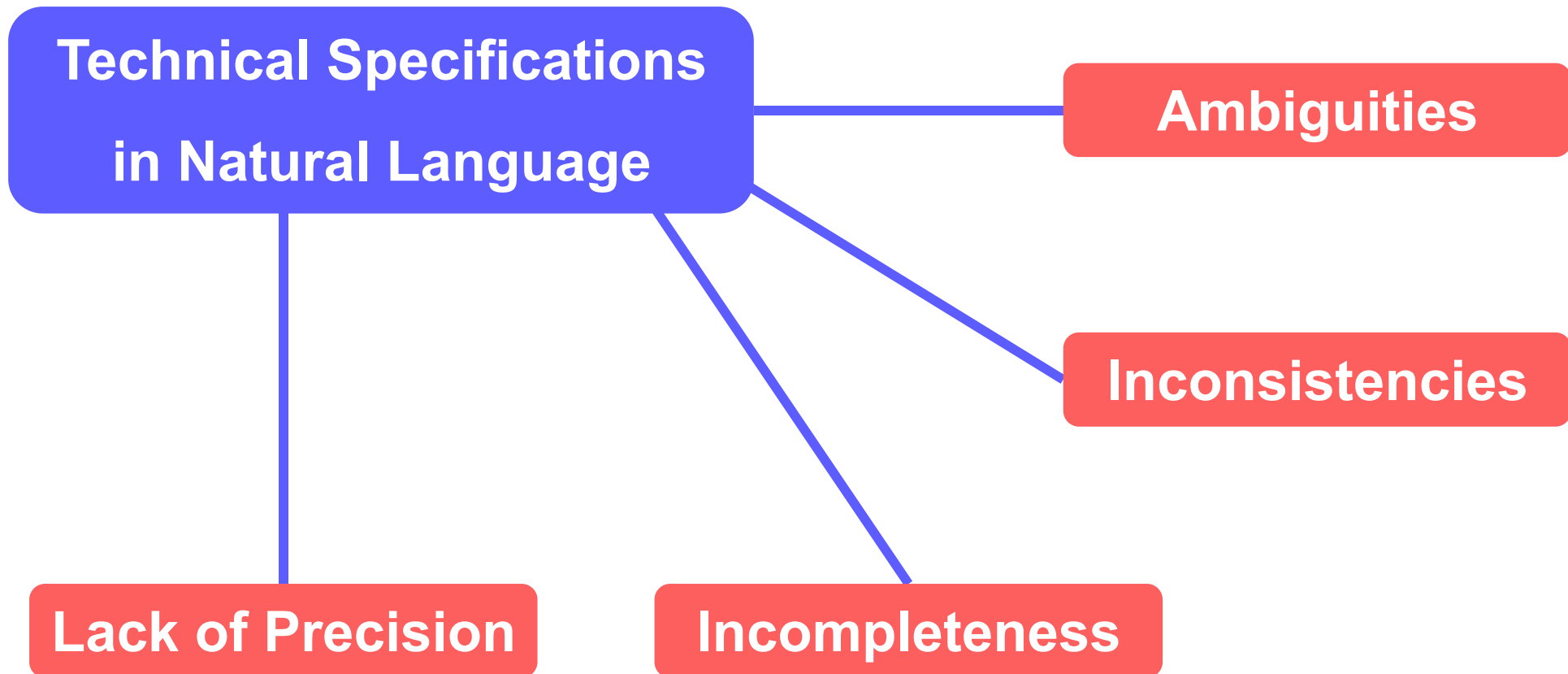
The Reality



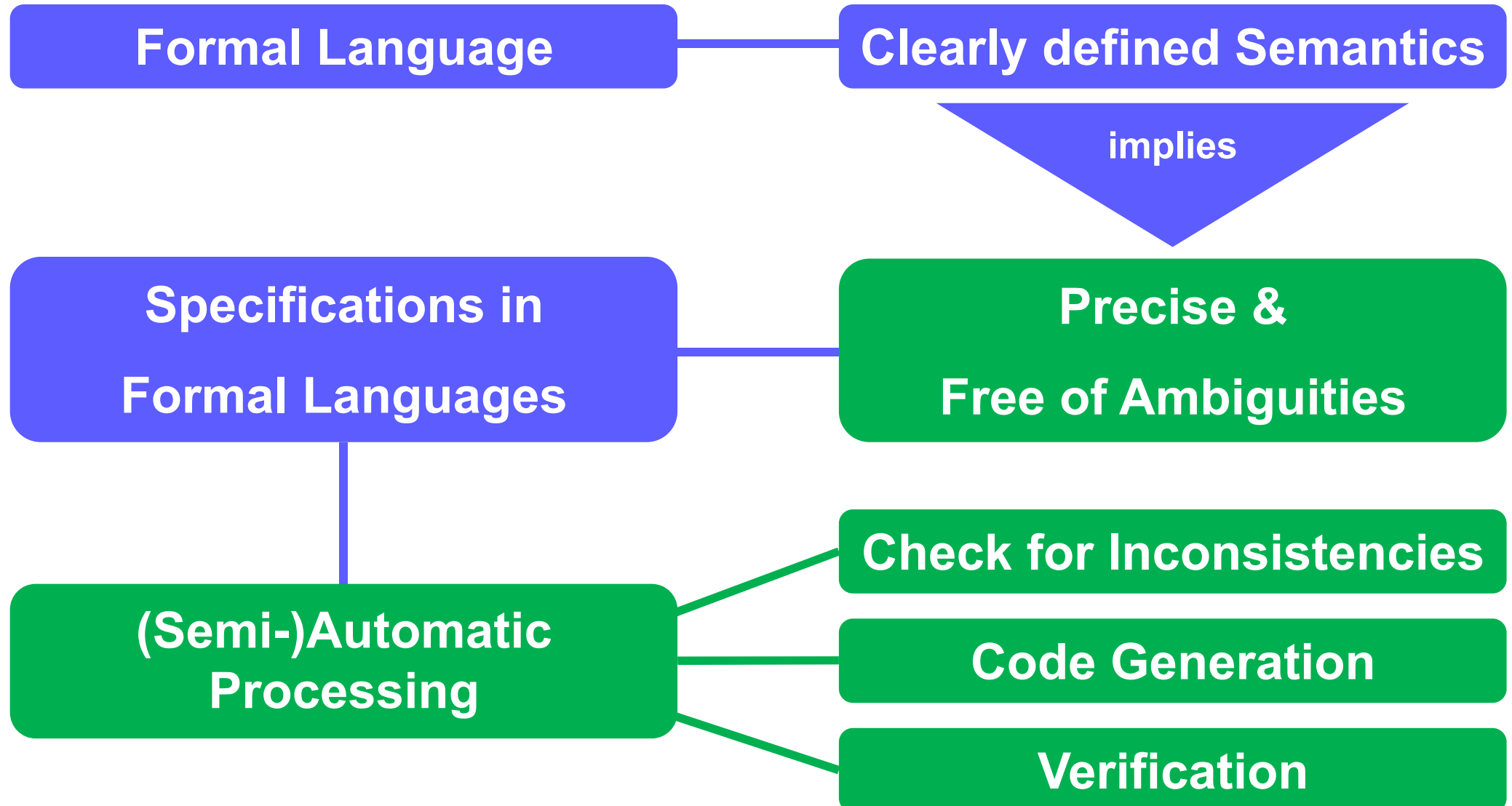
How do we achieve **real** interoperability?



The Problem



Solution: Formalisation



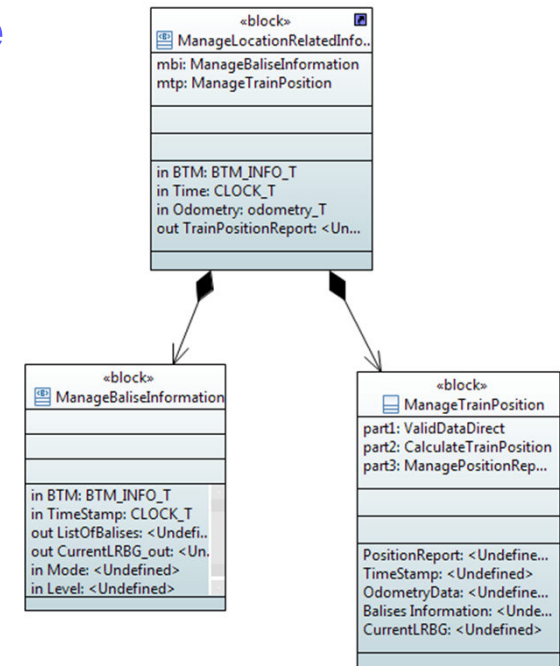
The openETCS Approach I

ETCS Specification
(natural language)

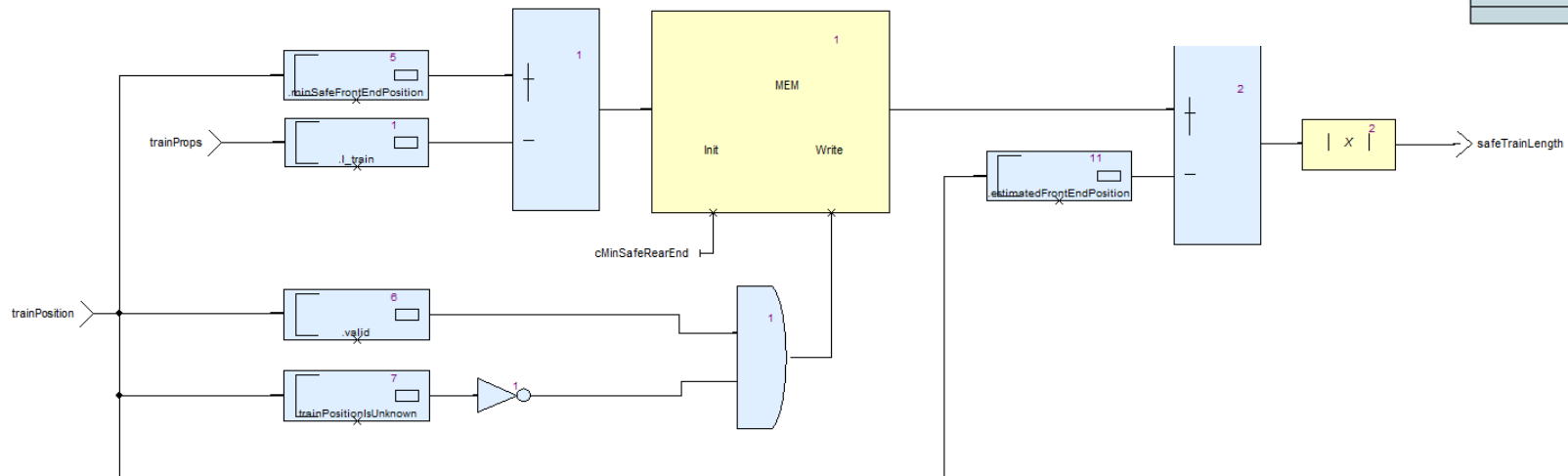
Formalisation

(Semi-)Formal Model

Architecture
(SysML)



Behaviour
(Scade)



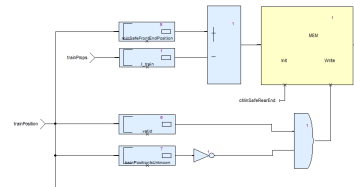
The openETCS Approach II

ETCS Specification
(natural language)



Formalisation

(Semi-)Formal Model

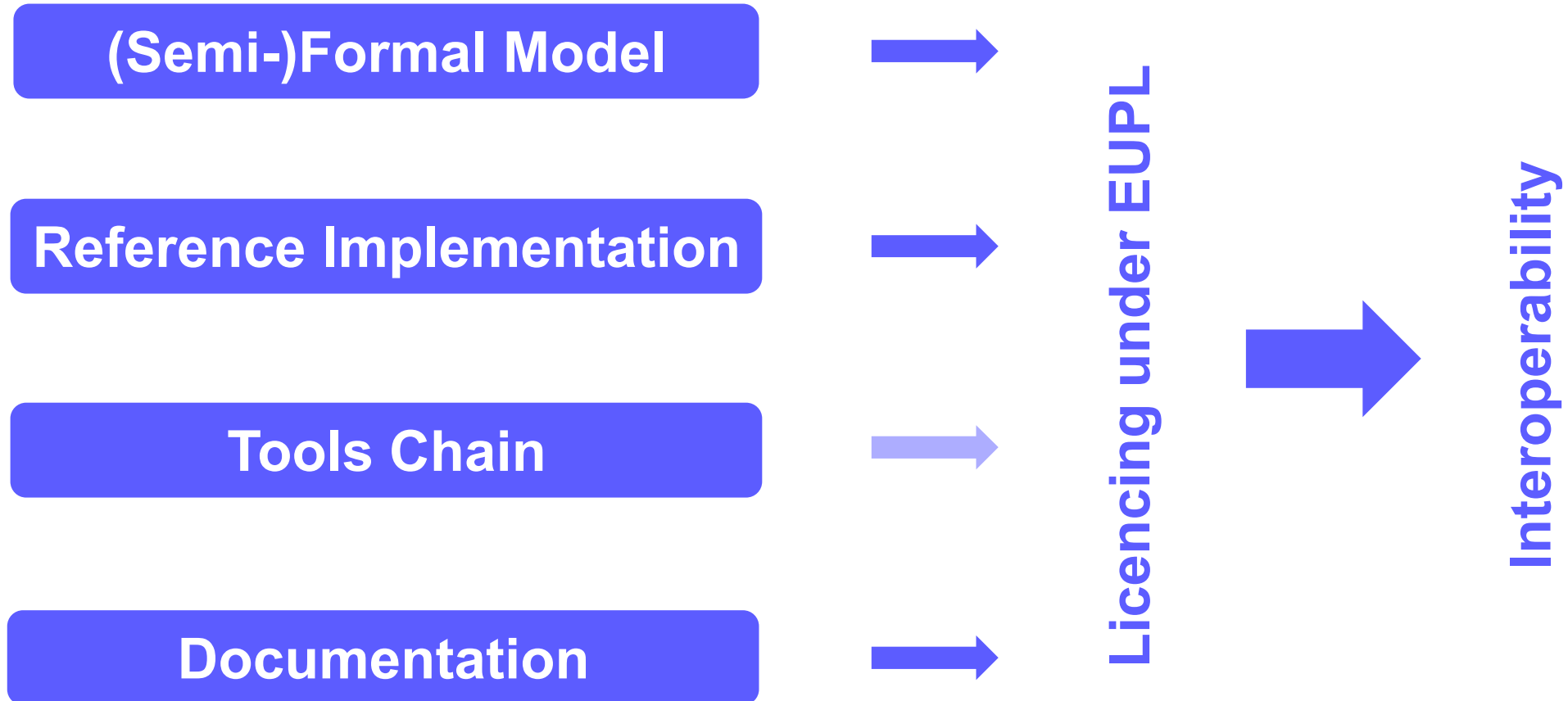


Code Gen.

Reference Implementation



Standardisation



openETCS Workshop

- Today, 16:00 – 18:00
- CityCube Berlin, meeting room R12 (level 3)

Booths of partners:

ERSA

Hall 11.2, Booth 110

Fraunhofer FOKUS

Hall 23B, Booth 206

Systerel

Hall 11.2, Booth 110



CityCube Berlin in Construction (CC BY-SA 3.0, Peter Kuley)