

# Confidential Evaluation of Software Trustworthiness



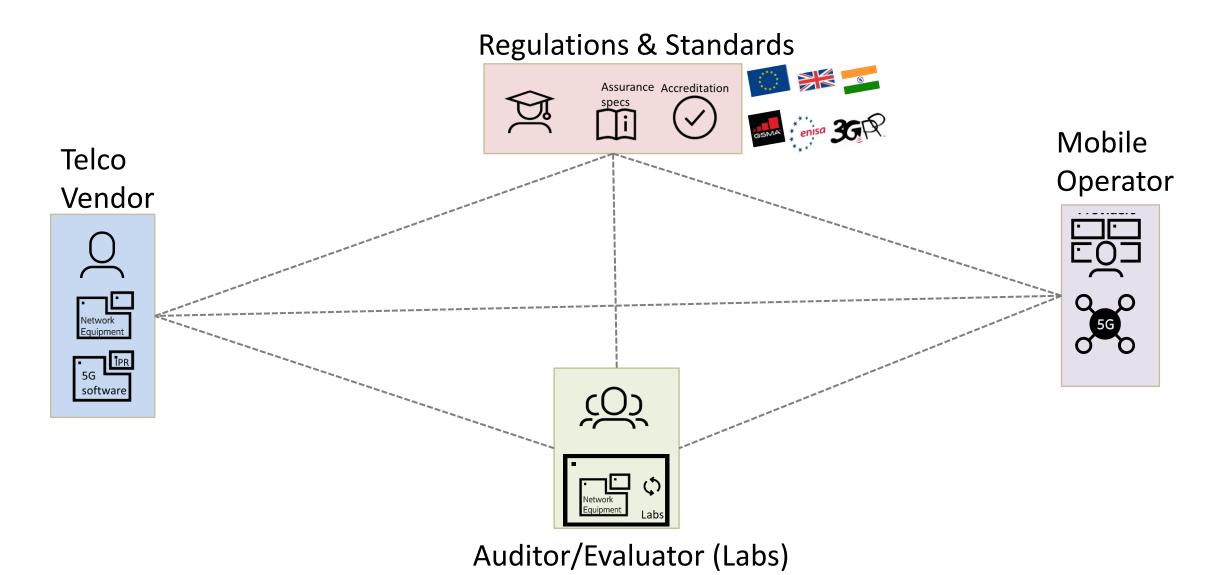






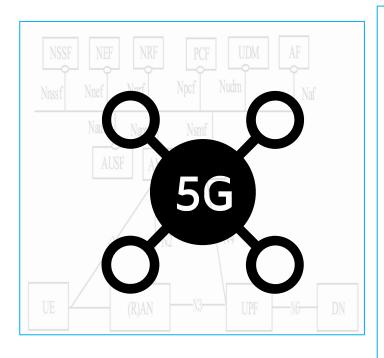


# **Telco Security Assurance Playground**





### **Motivation: Softwarization & Telco Regulations**

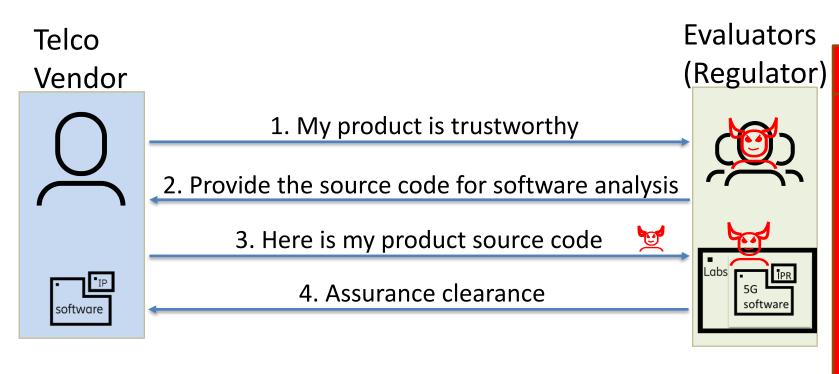


Some extracts from regulations:

- Vendors must submit to accredited evaluator:
  - product <u>source code</u> for source code review
  - product binaries for vulnerability assessment
- Operators must secure the <u>software supply chain</u>



### The assurance game & risks



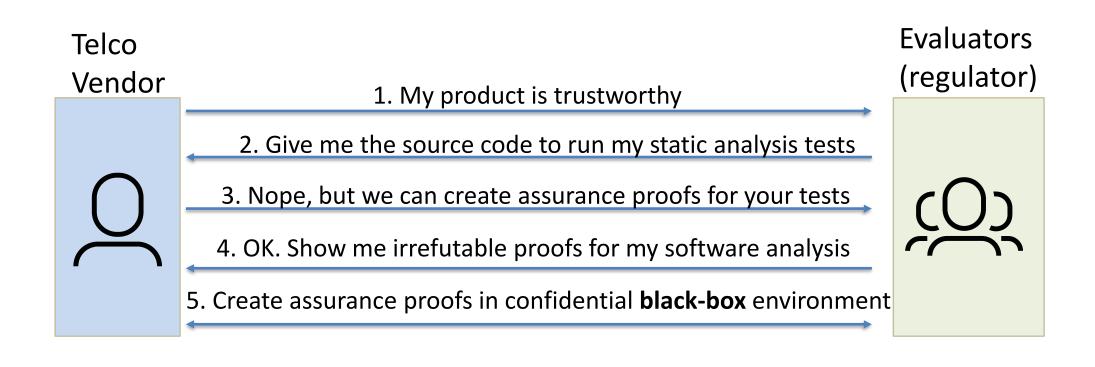
#### **RISKS**

#### SW can be tampered, copied, stolen

- during delivery from vendor to evaluator
- during storage at evaluator labs
- upon load from labs storage to RAM
- upon testing in RAM or swap to disk
- during visual source code inspection
- by software analysis tools
- via tests reports exposing source code



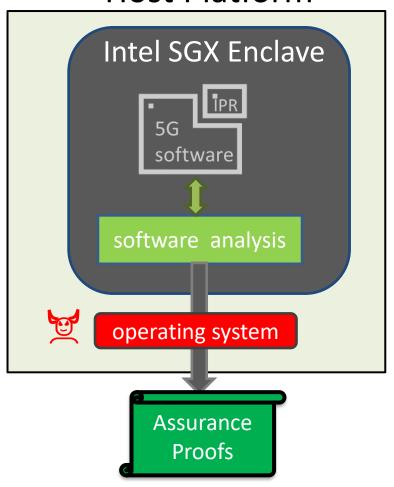
## Challenge – Changing the rules of the game





### Technology Enabler & Goal

#### **Host Platform**



#### Goal

Research & develop a prototype for software assurance exploiting **confidential computing**:

- For vendors to upload proprietary software
- For evaluators to only collect assurance proofs
- Supporting automated software analysis
- Supporting Telco security assurance test use cases
- Extensible for additional tools and test use cases



### **Preliminary Results**



- Study on Telco assurance in several jurisdictions
- Use cases and requirements
- Evaluation of automated software analysis
- Risk analysis, trust model
- Draft solution architecture
- Demo



#### **CEST Consortium**



Telco vendor. Need owner



Security assurance & certification



Confidential computing



Cybersecurity research

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