



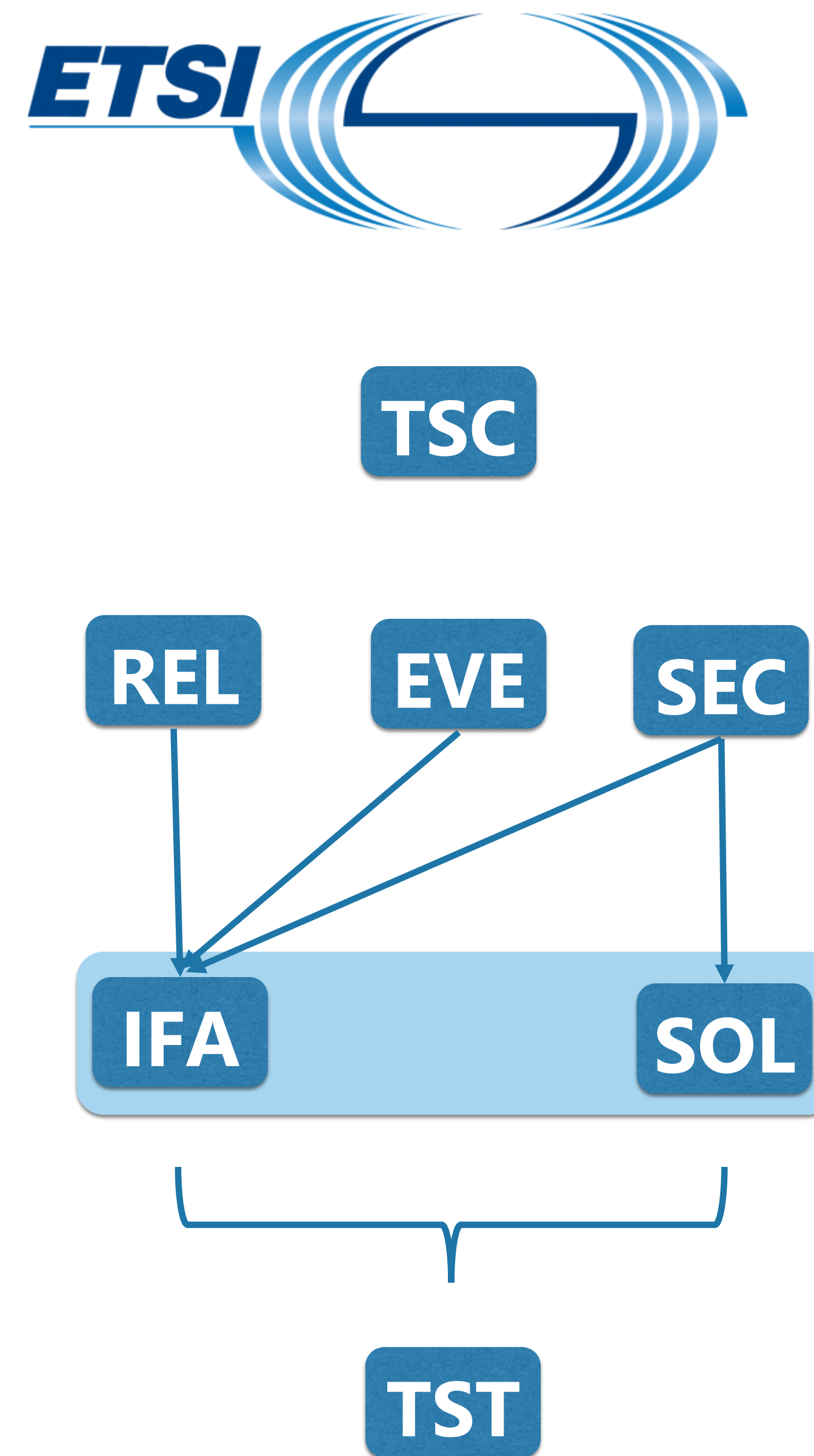
CI/CD in ETSI NFV environment

PIERRE LYNCH (IXIA/KEYSIGHT), GERGELY CSATARI (NOKIA)

ETSI NFV

→ ETSI hosts multiple standards bodies, technical committees, etc

- NFV is one of them
- 315 participating organizations in NFV
- Contribution-based, consensus-driven
- Organized in 6 Working Groups
 - IFA – Interfaces and Architecture
 - SOL - Solutions
 - EVE – Evolution and Ecosystem
 - REL – Reliability
 - SEC – Security
 - TST – Test, Experimentation and Open Source



Key Targeted DevOps Concepts

- Softwarization as an Opportunity
- Complete Automation between Different Organizations/Companies
 - CI Pipeline, Testing, Feedback, Tools
- Cross-Functional, Cross-Organization Teams
- Working towards Smaller, Incremental Changes
- Fail Fast, Fail Forward
- Decoupling Deployment from Activation

ETSI GS NFV-TST006 V0.0.9 (2018-04)



**Network Functions Virtualisation (NFV);
NFV Test;
Report on CI/CD and Devops**

Vendor ↔ **Operator**

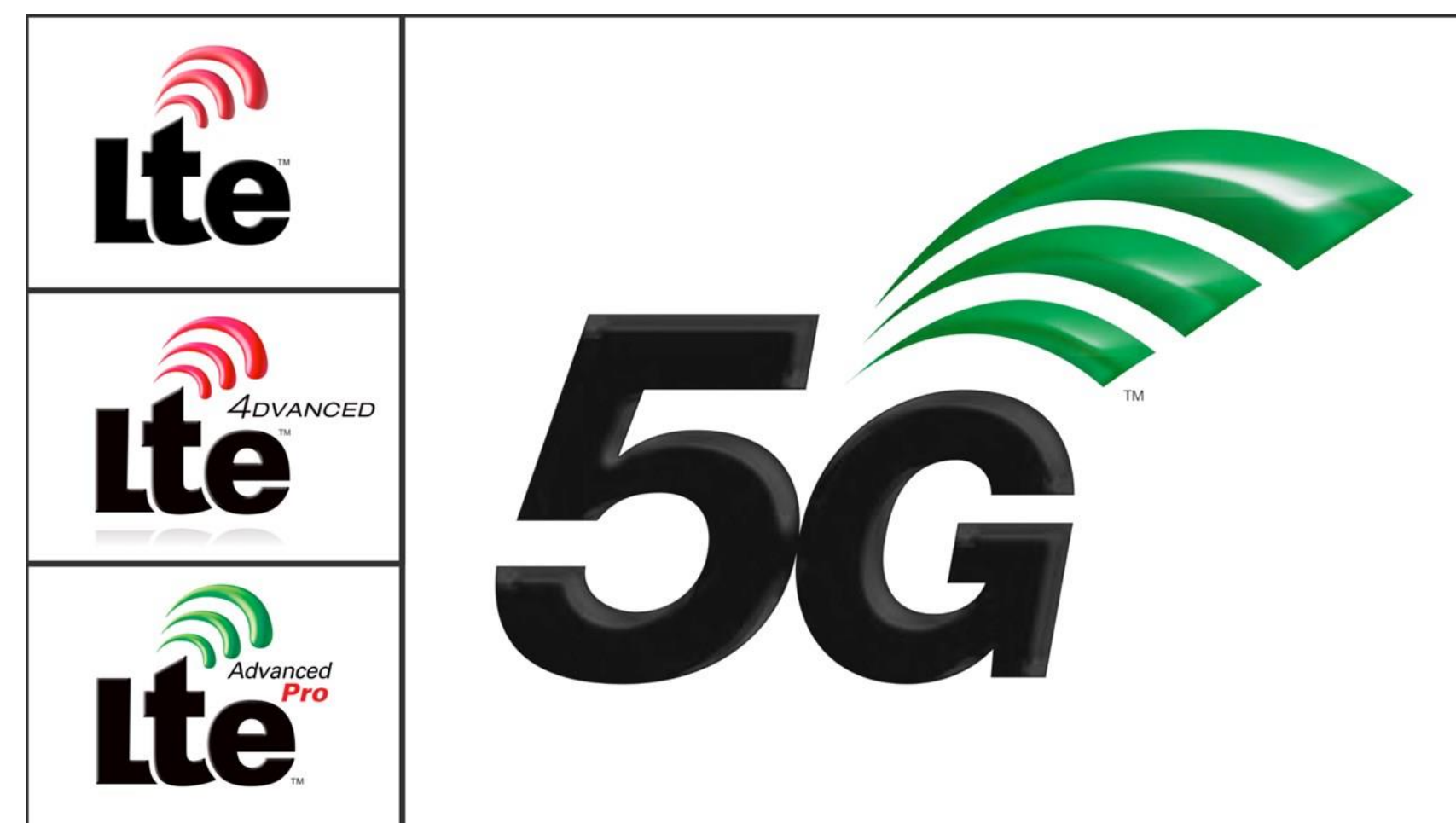
Why is Telco Different?

→ Regulation

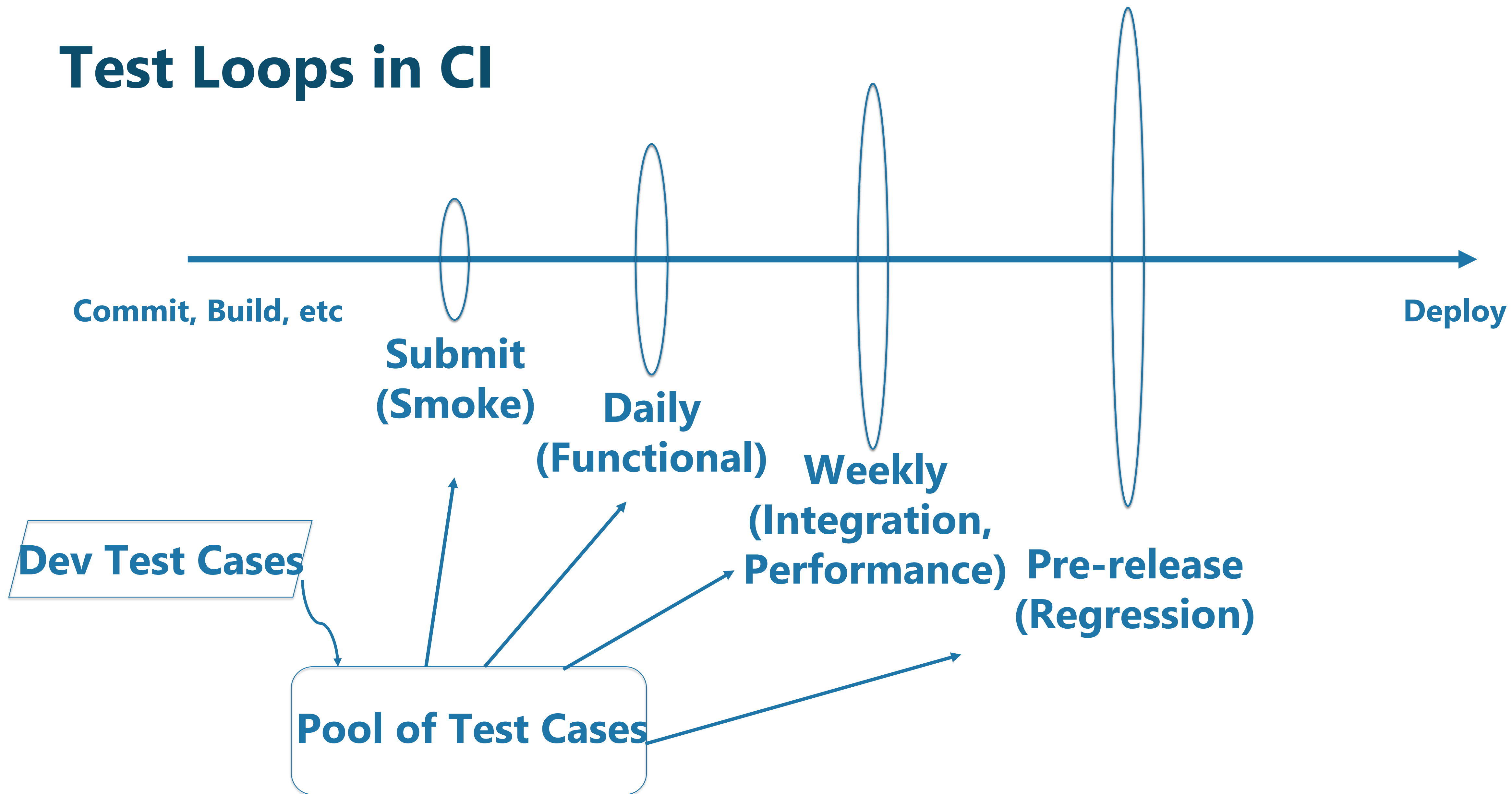
- 911/112
 - Location Reporting
 - Lawful Intercept
 - Standards often mandated
 - Different across the world

→ FirstNet

→ Significant Financial Risk



Test Loops in CI



Commit, Build, etc

Deploy

**Submit
(Smoke)**

**Daily
(Functional)**

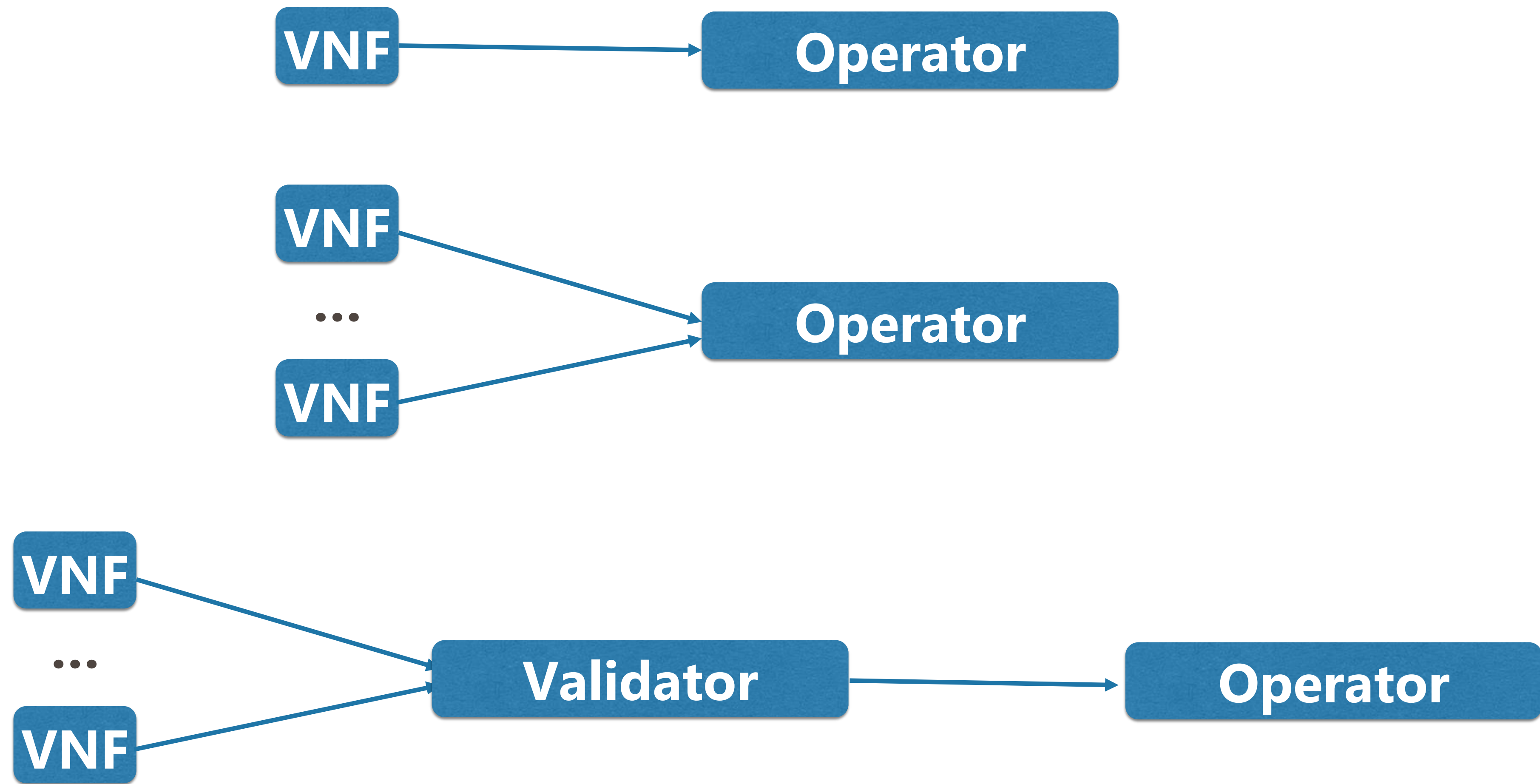
**Weekly
(Integration,
Performance)**

**Pre-release
(Regression)**

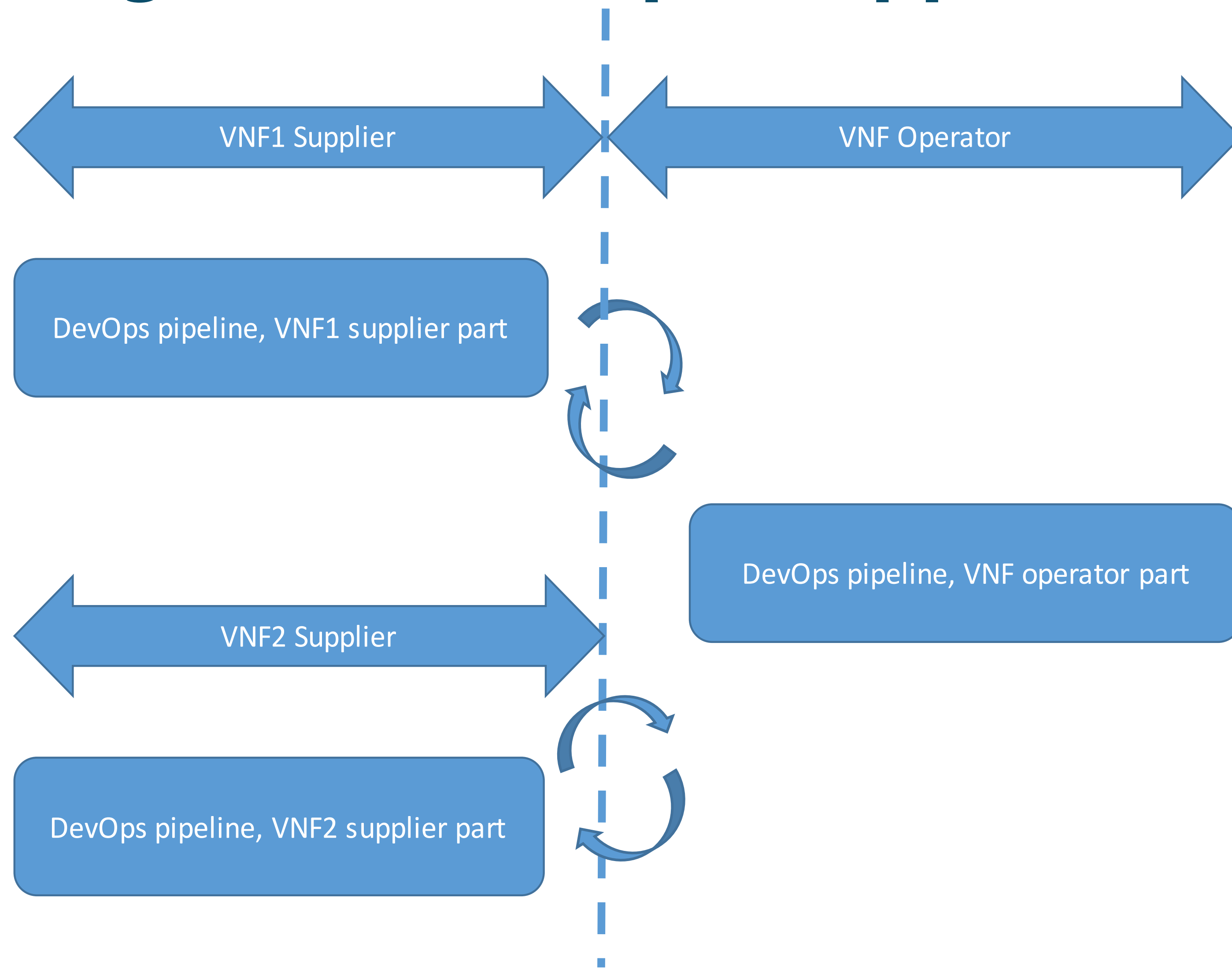
Dev Test Cases

Pool of Test Cases

Use Cases



Pipeline Integration: Multiple Suppliers



Pipeline Integration: Multiple Suppliers, Integrator/Validator

