End User Advisory Group Meeting: OVP Evolution

Long and Mid Term Priorities and Planning

Feb. 12, 2019

LF NETWORKING

THE LINUX FOUNDATION

LFN CVC | A step back – what do we need

Note MANO could also be System Under Test

Standards / Requirements

ONAP VNFRQTS

Operator Specific Req

ETSI

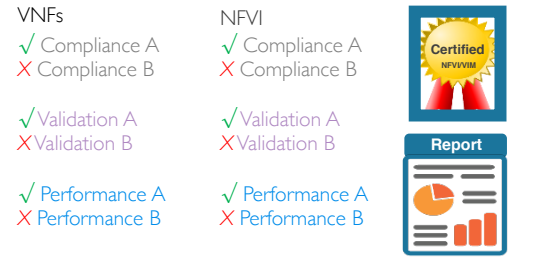
GSMA

3GPP A GLOBAL INITIATIVE

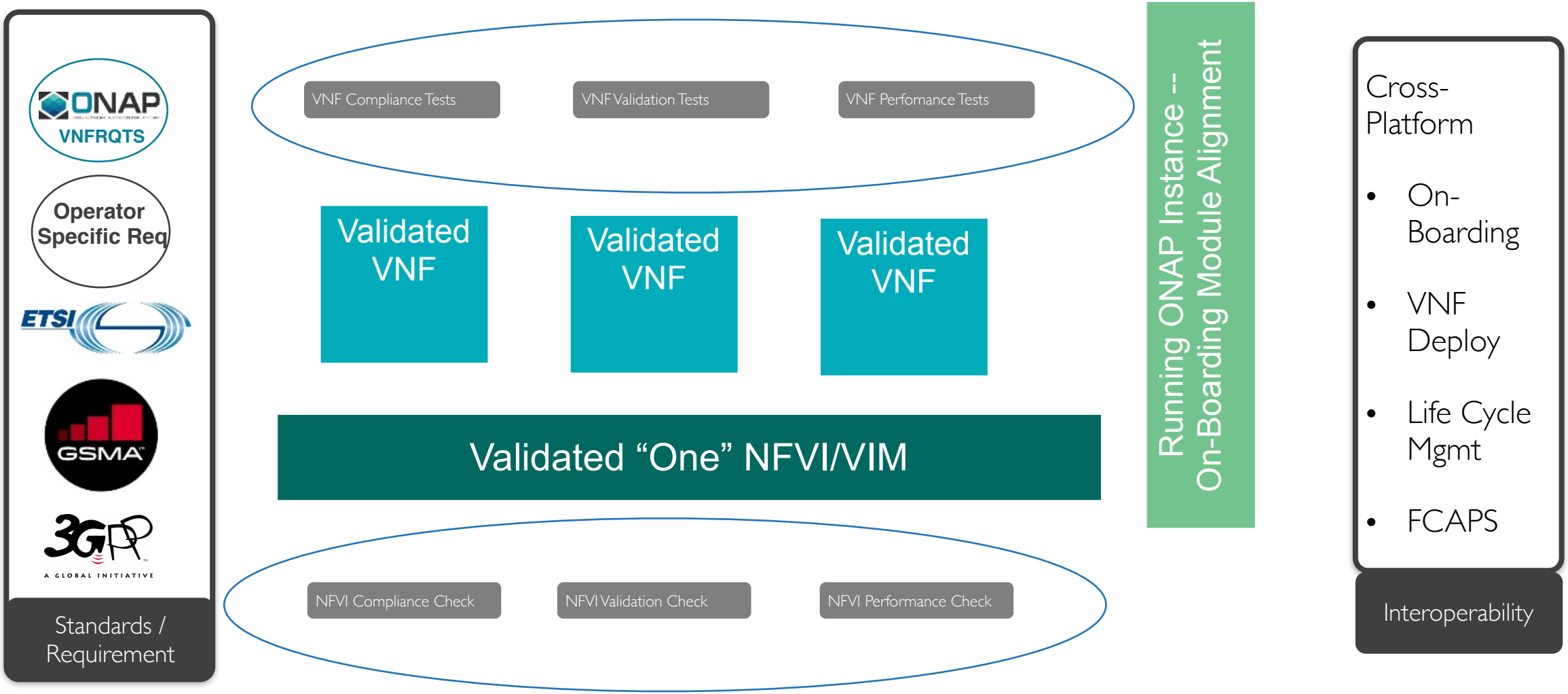
	VNF Compliance Checks	VNF Validation Tests	VNF Performance Tests	Testing/ Certification Tools
VNFs	Check against existing VNF standards such as: ➢ ONAP VNFRQTS ➢ ETSI NFV ➢ GSMA ➢ 3GPP ➢ Operator specific requirements.	Validation tests for VNF running against various profiles. (LCM, Health, etc) ➢ OpenStack ➢ VMWare ➢ Kubernetes ➢ etc	Performance tests for VNF running against a given Infrastructure profile ➢ Profile A ➢ Profile B ➢ Profile C	Tooling to allow test cases to run and results to be submitted to a repository. Unified repository for both VNFs and NFVI.
NFVI	NFVI Compliance Checks	NFVI Validation Tests	NFVI Performance Tests	
	Check against existing NFVI standards such as: ➢ ETSI NFV ➢ GSMA	Validation tests for VFVI ➢ OpenStack ➢ VMWare ➢ Kubernetes ➢ etc	Performance tests for NFVI against given Infrastructure profile ➢ Profile A ➢ Profile B ➢ Profile C	

Compliance Process

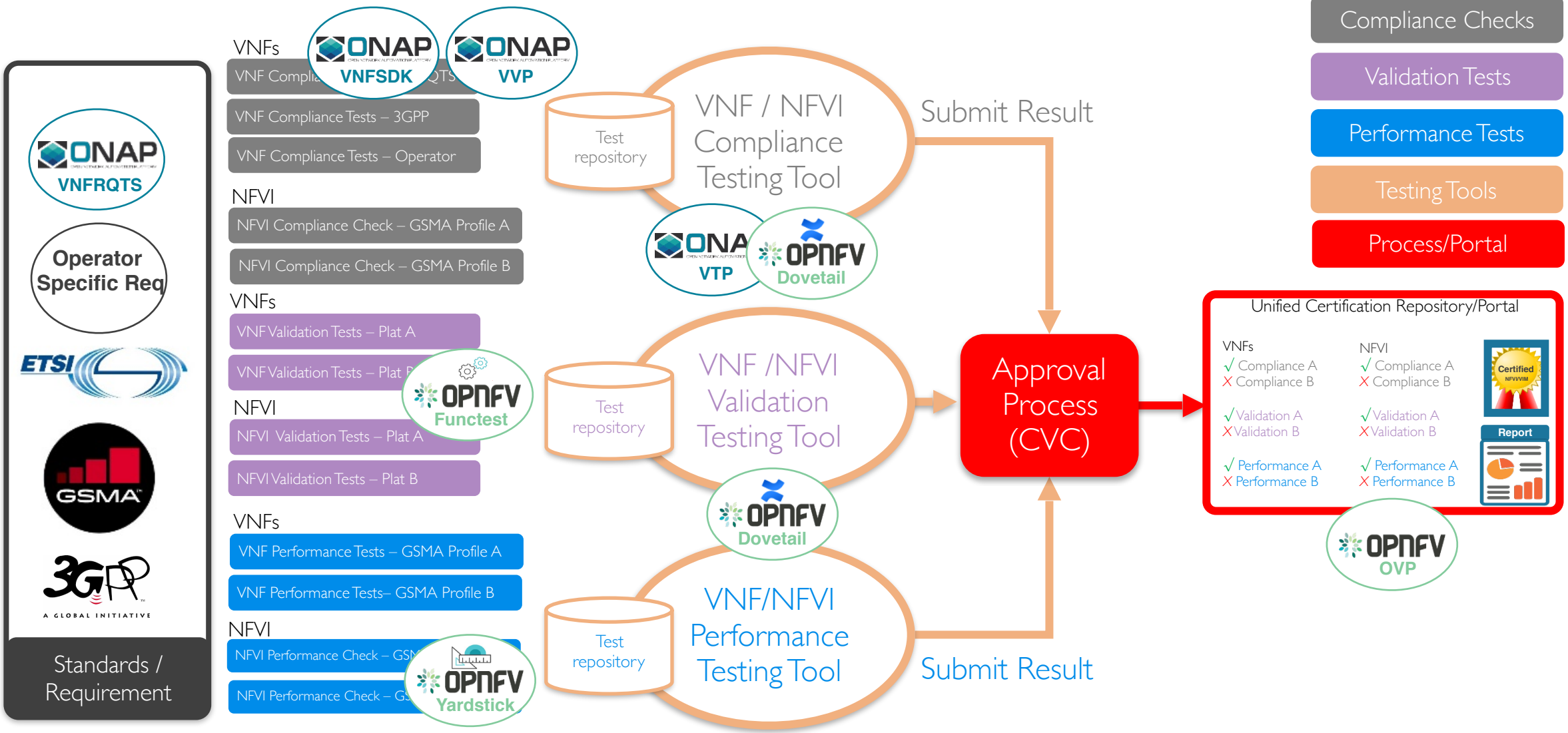
Unified VNF/NFVI Certification Repository/Portal



Vision – End to End Lifecycle System Validation



LFN CVC | What exists today

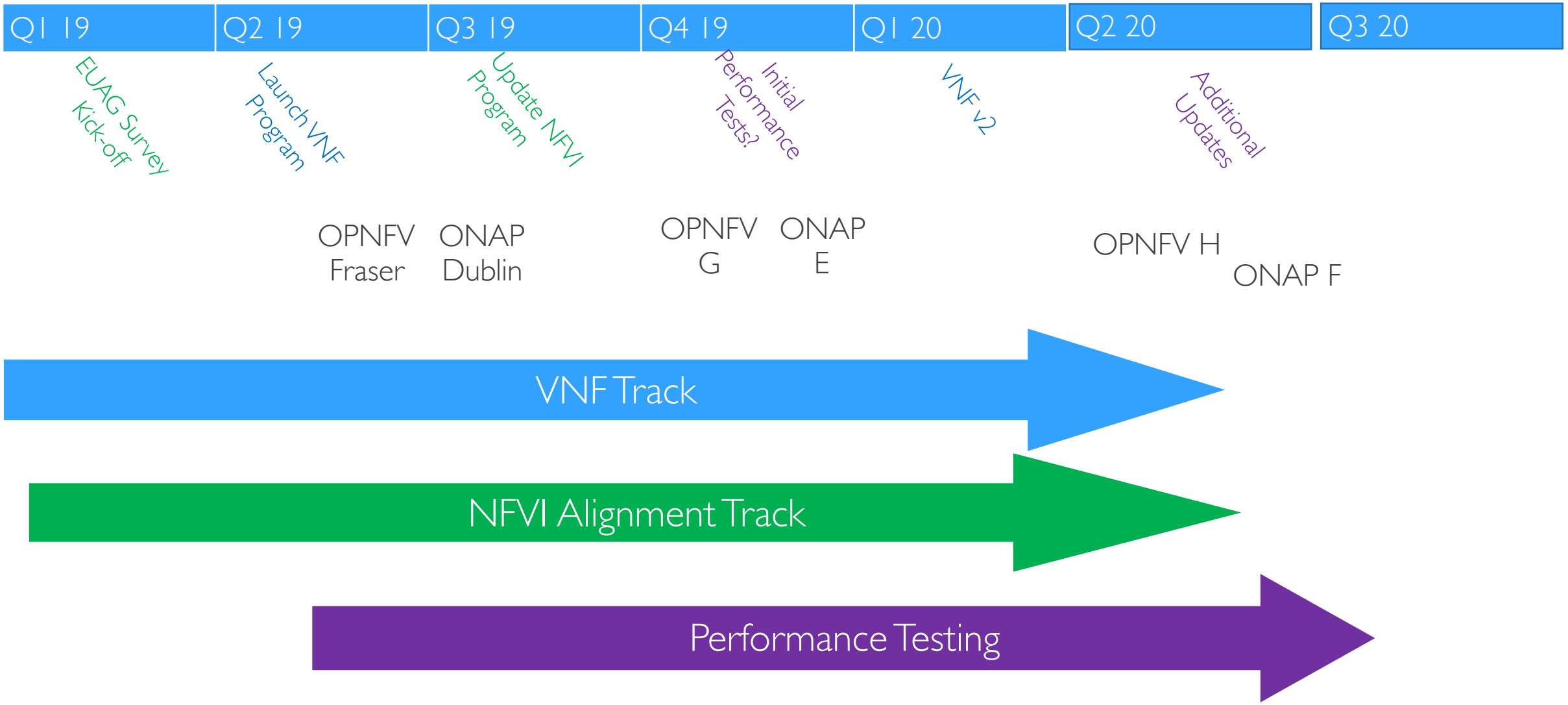


OVP Steps and Roadmap priorities

- Which activities do we want to prioritize first?
- Do we want to prioritize depth (e.g. expanding VNF compliance tests) or breadth (Getting VNF validation tests written)?

	Alignment	Compliance	Validation	Performance	Interop
NFVI/VIM	2		4		
VNF		1	3		
MANO	5				

Rough Initial Timeframe



Backup

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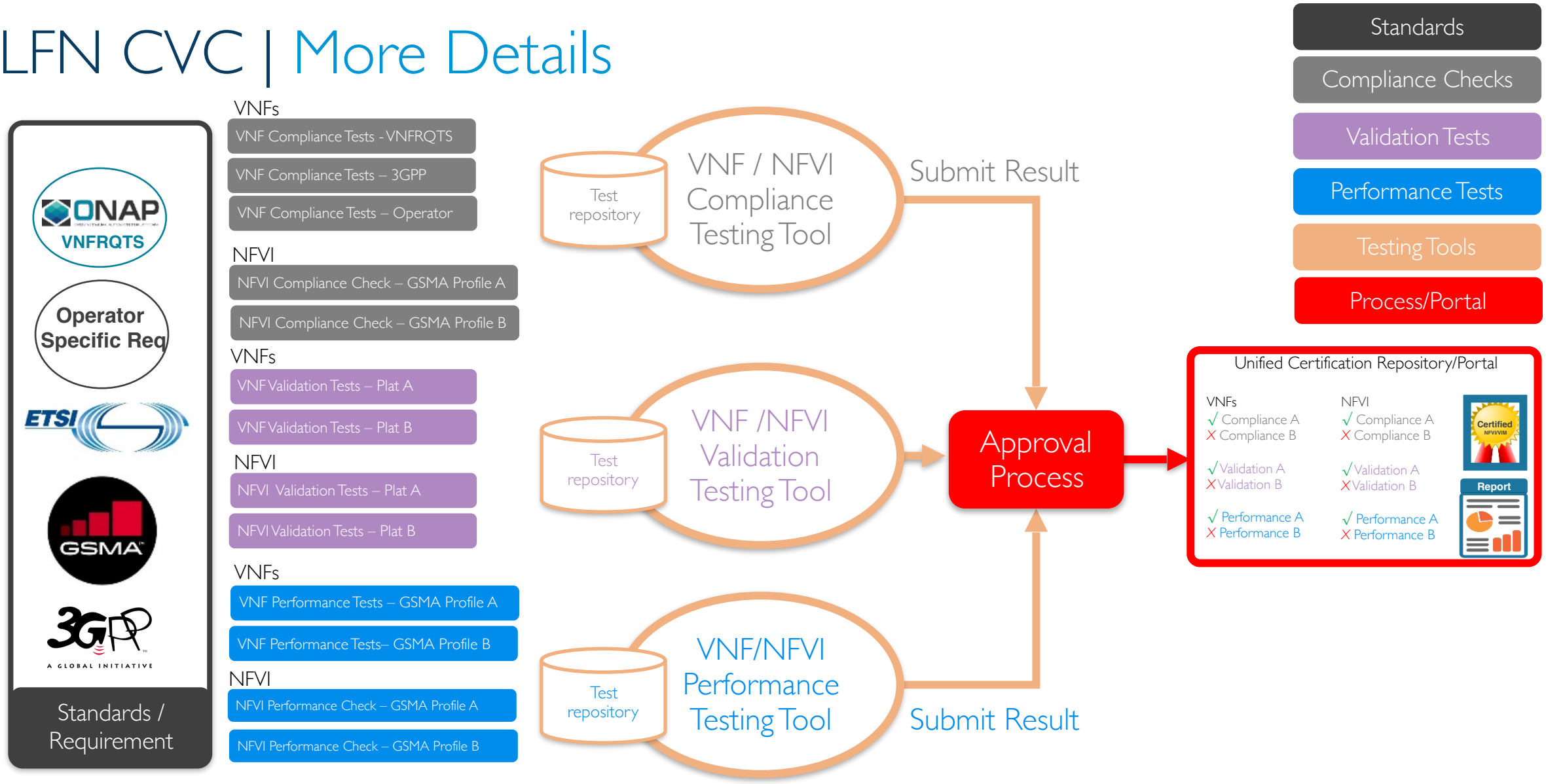
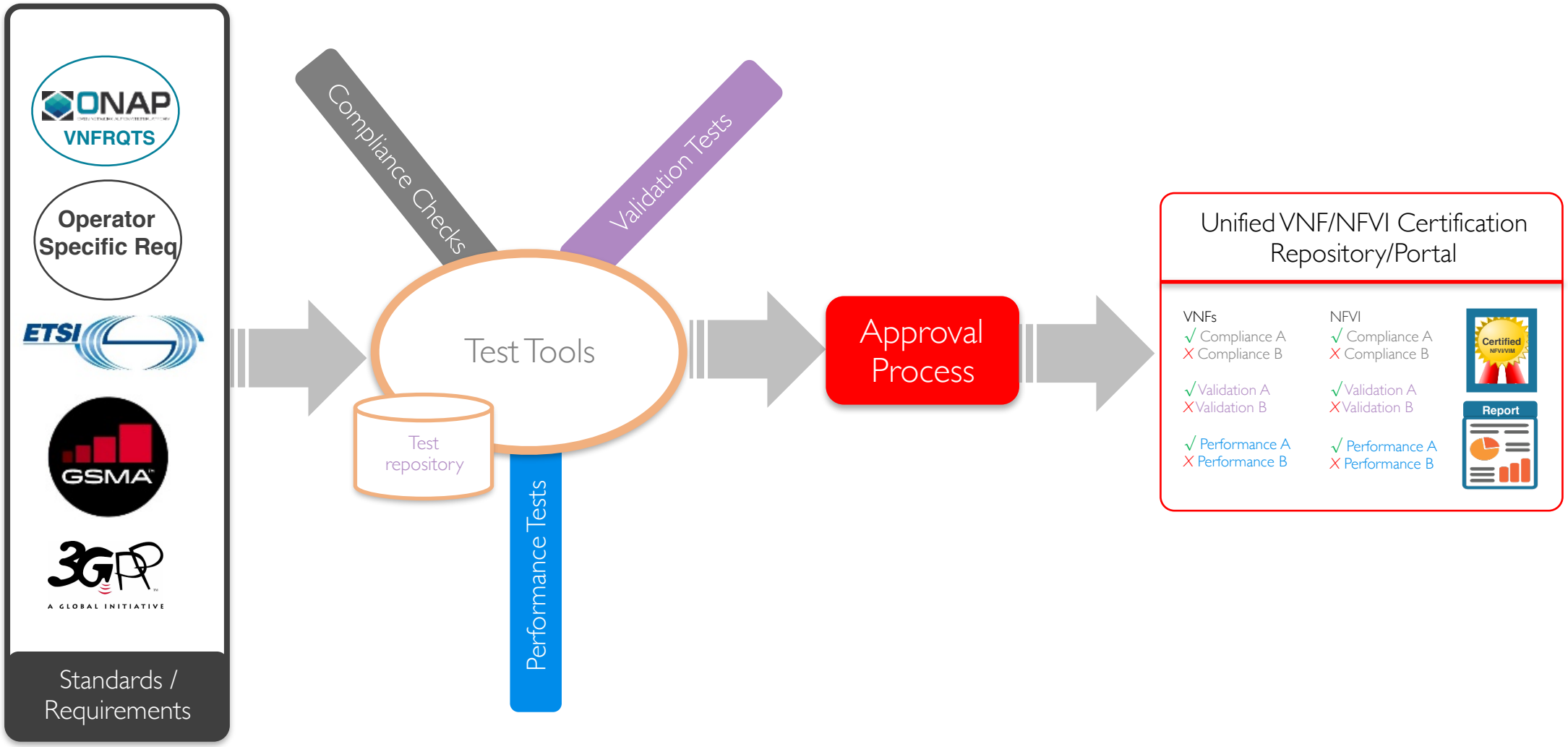
LFN CVC | More Details

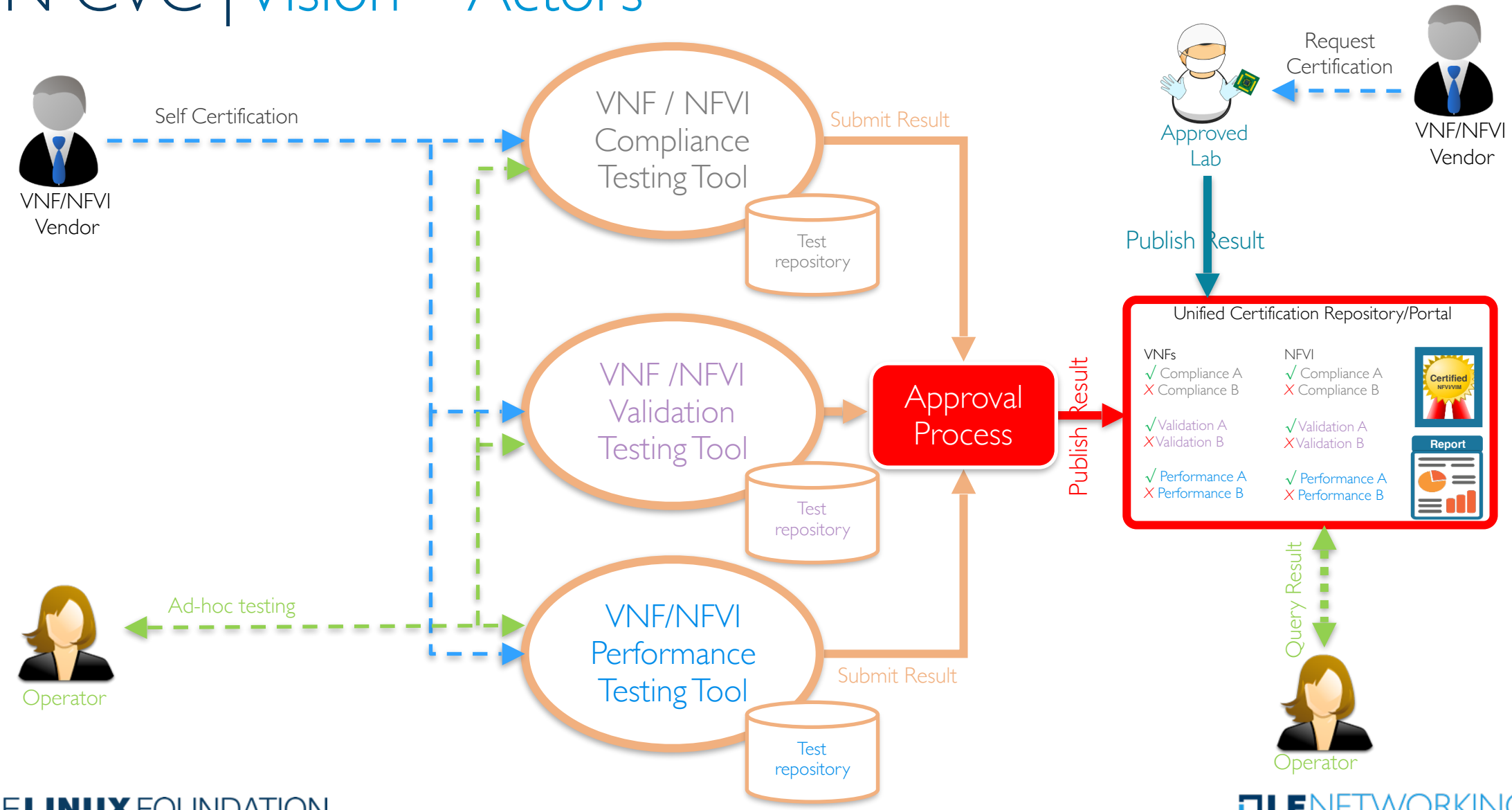


LFN CVC | Vision - overall

Keep it simple!



LFN CVC | Vision – Actors



LFN CVC | What exists today - VNFRQTS

ONAP Standard

VNF Guidelines.

VNF Test Case Description.
- VNF Package Inspection.

VNF Provider Use Case.

VNF Requirements.
- 789 numbered requirement in Casablanca
- Of which 634 are MUST/MUST NOT.

LFN CVC | What exists today - VNFSDK

TOSCA Compliance Checks

TOSCA Tests.

- Cover 11 Requirements.
- 6 Tests in Casablanca

LFN CVC | What exists today - Functest

Validation Tests

Platform Specific Validation Tests

Functional Tests.

- Health checks.
- Smoke.
- Benchmarking
- VNFs

+ 1000 tests including upstream suites for OpenStack & Kubernettes.

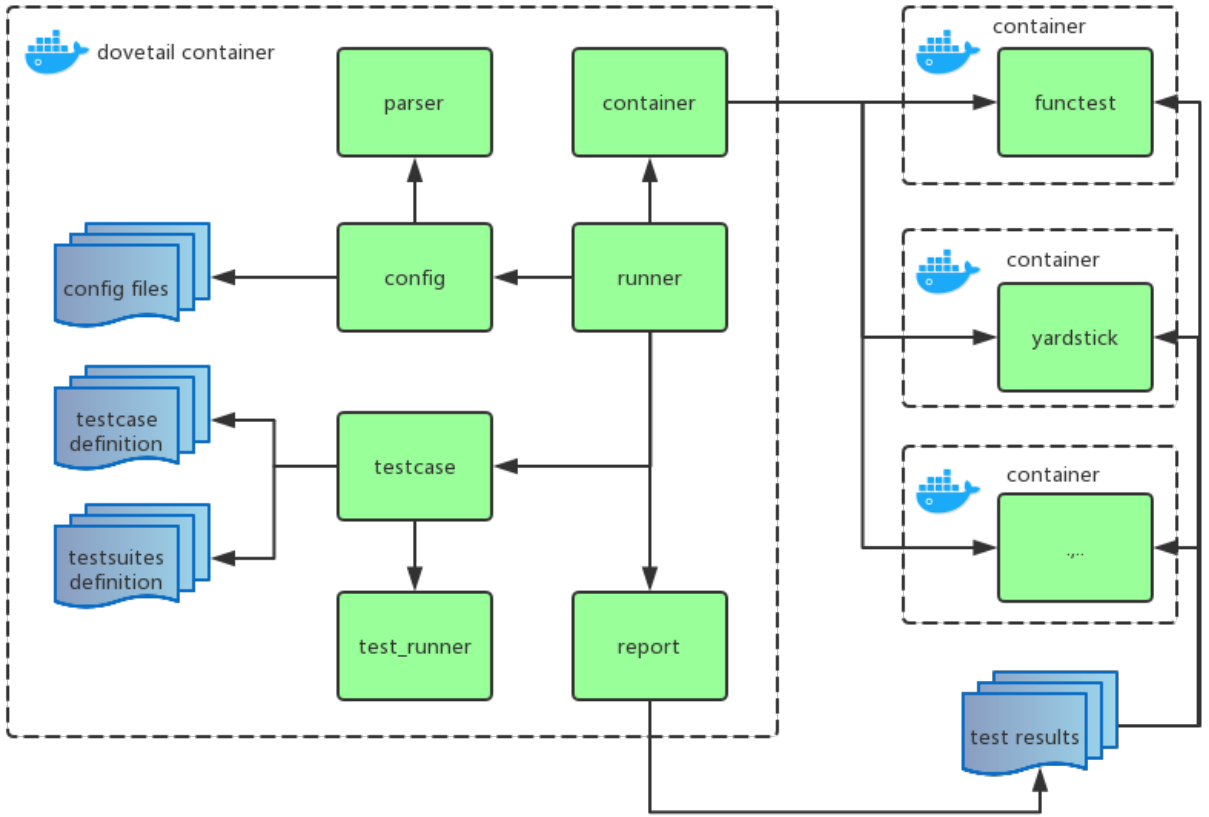
LFN CVC | What exists today - Dovetail

Certification & Testing Tool

Testing Tools

The Dovetail Test Tool is :

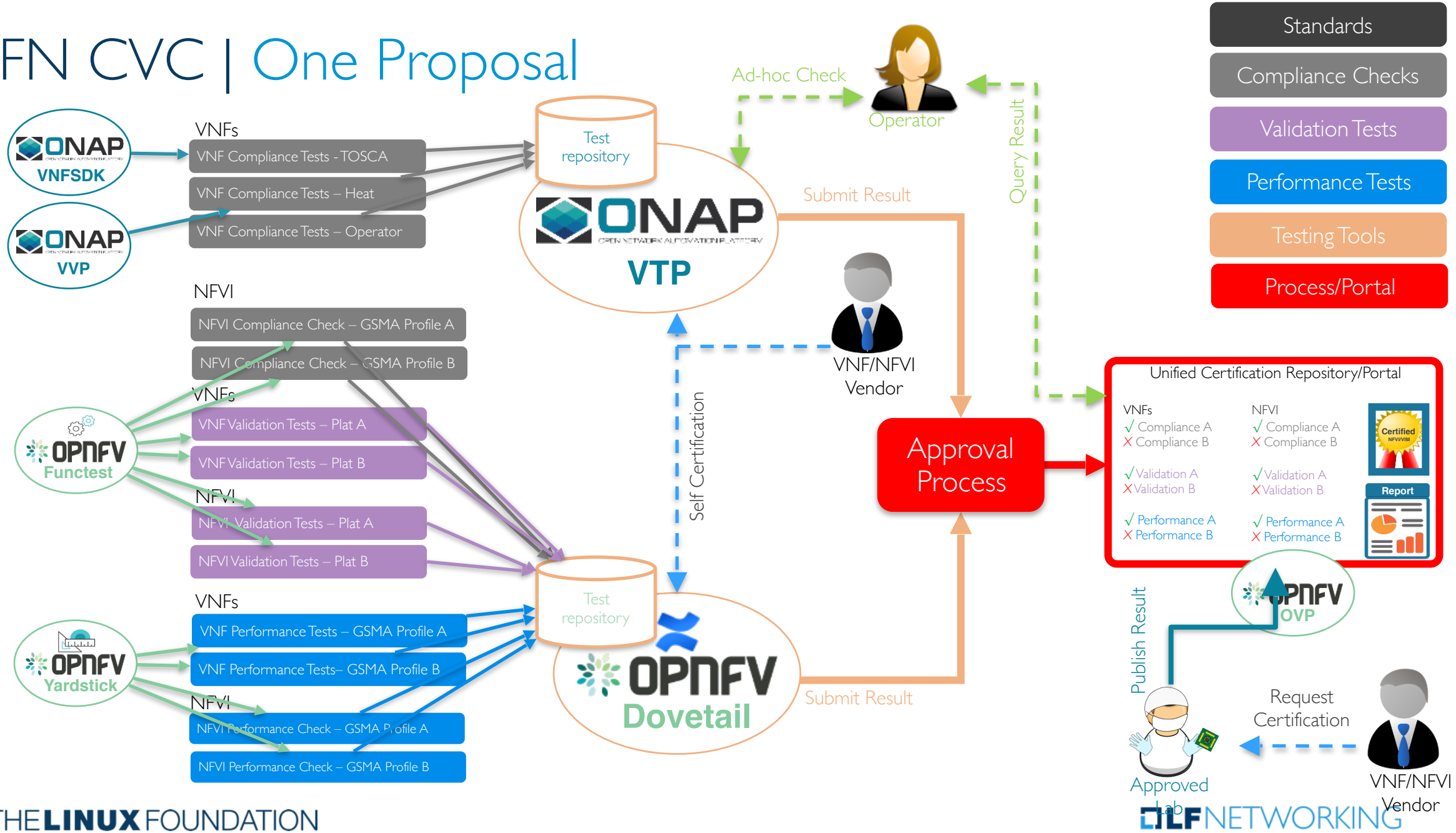
- Designed to leverage existing OPNFV test projects (such as Functest and Yardstick).
- Automate the execution of Dovetail Test Areas and Test Cases in a way that satisfies compliance testing requirements.
- Generate required reports for use by the OPNFV compliance verification program.



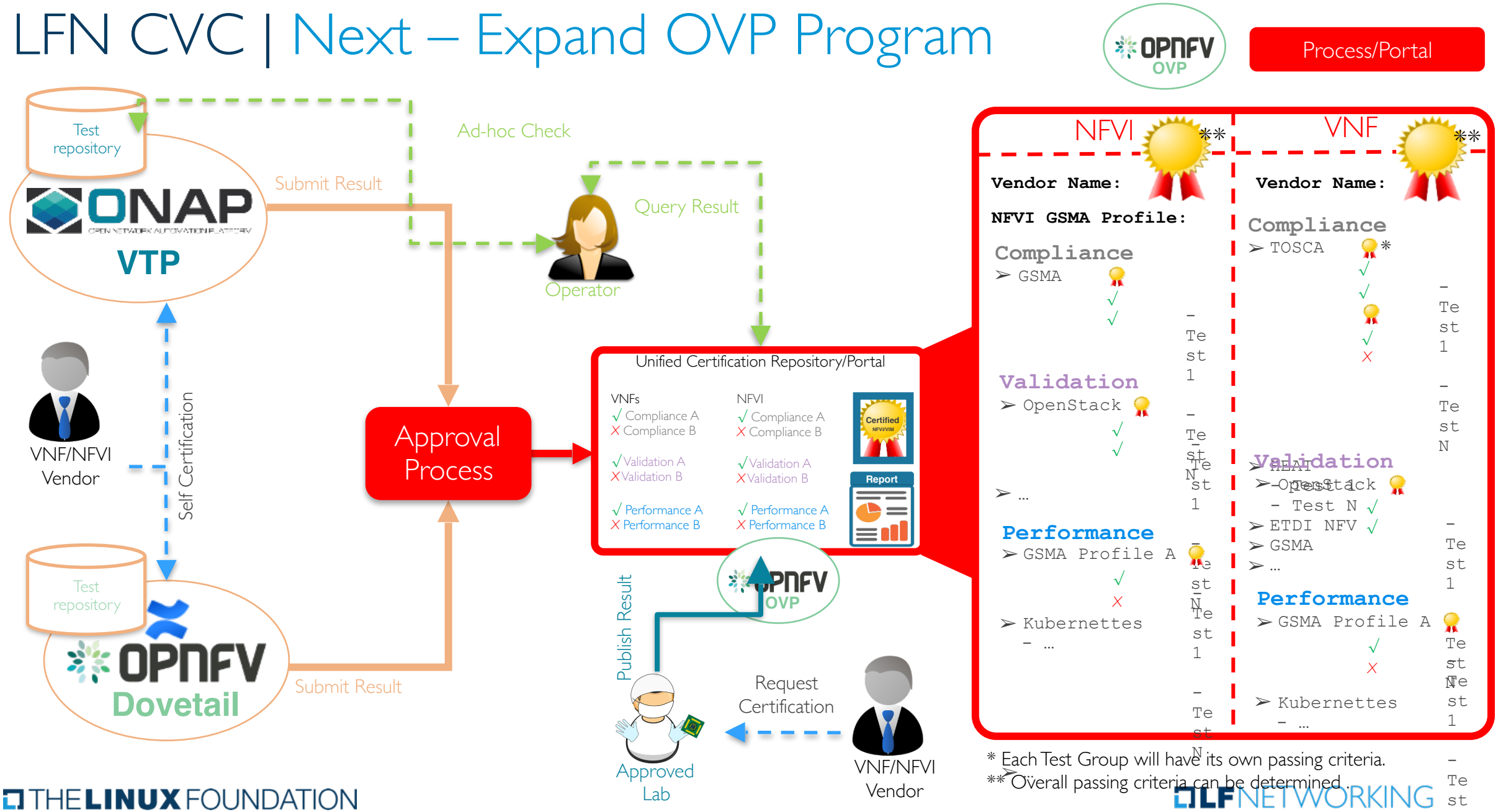
We are almost there …

… but some unification and role clarifications needed

LFN CVC | One Proposal



LFN CVC | Next – Expand OVP Program



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Next – Alignment and Execution – BREAK DOWN SILOS

Clarify Scope and align with vision — SPOC: <name>

Clarify Scope and align with vision — SPOC: <name>

Clarify Scope and align with vision — SPOC: <name>

Clarify scope and align with vision — SPOC: <name>

Clarify/Expand scope and align with vision — SPOC: <name>

Clarify/Expand scope and align with vision — SPOC: <name>

Certification & Testing Tool — SPOC: <name>

OVP VNF Launch

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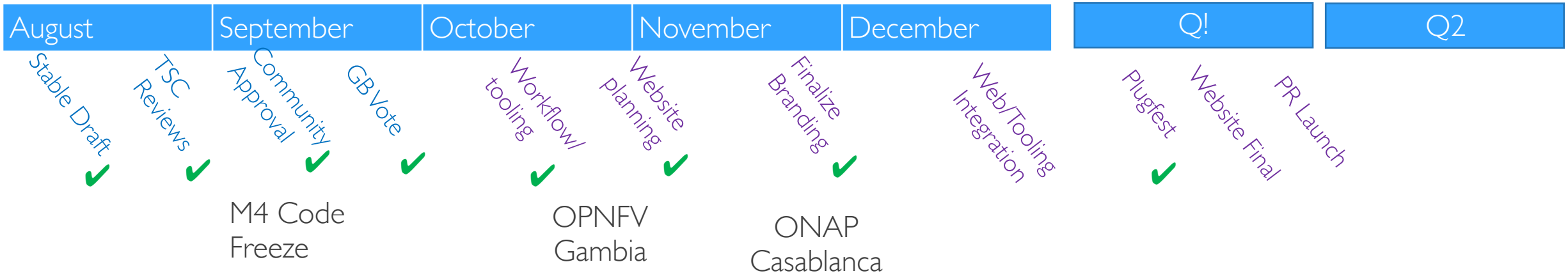
OVP- VNF Compliance Program Launch Timeline



Program Definition

- Approve Program Governance
- Finalize 3rd Party Lab Governance
- ONAP Test Case Development
- VNFSDK Refactoring Work
- Start documentation work

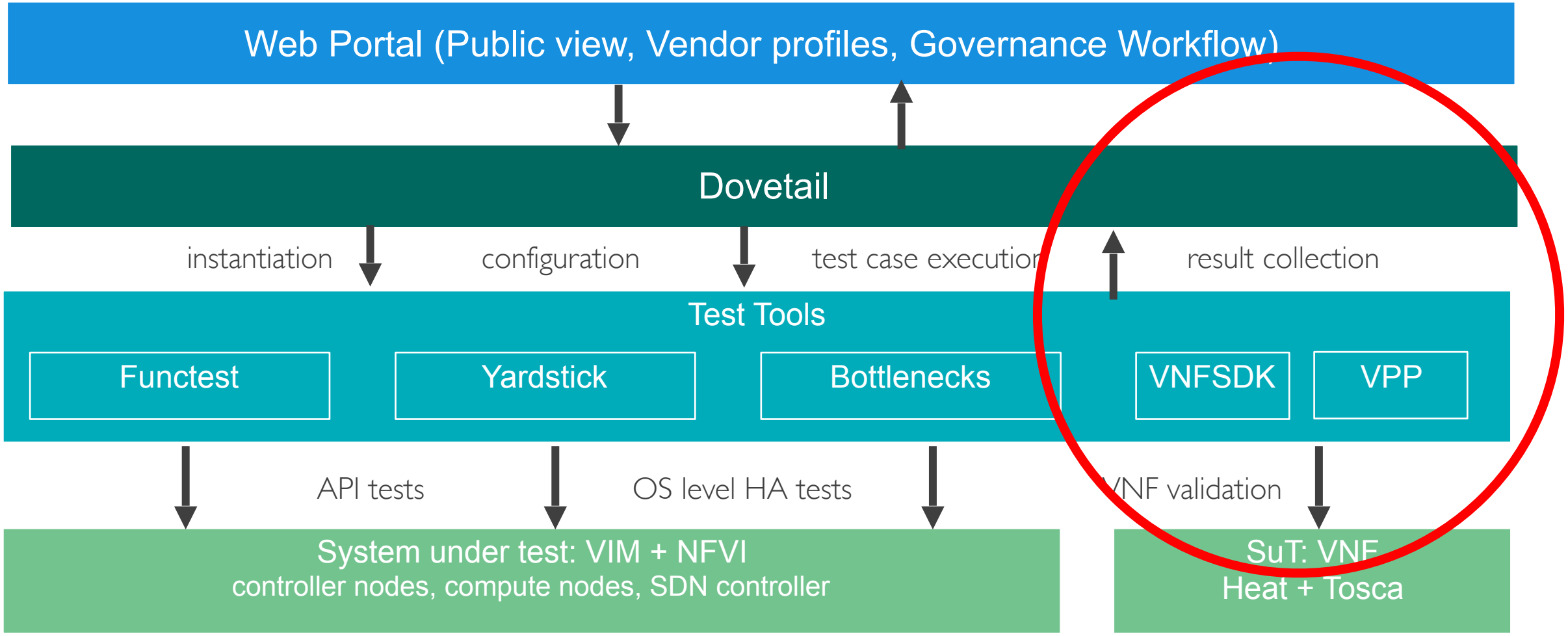
Technical Enhancements

- Beta testing ONAP VNFs
- Dovetail Integration

Go to Market

- Vendor Outreach/Initial cohort recruitment
- (Re)branding and website
- Finalize Terms & Conditions

OVP Toolchain



Outstanding Items for Tool and Portal Integration

- VVP/VNFSDK <-> Dovetail Integration
- Test Triggering via Dovetail for vendors
- Test Result/Debugging/VNFREQ pointers for vendors testing in VNFSDK
- Final Portal Presentation

- Project Plan and Dependencies (In Progress): https://wiki.opnfv.org/display/dovetail/Dovetail+Home

Alignment Constraints and Challenges

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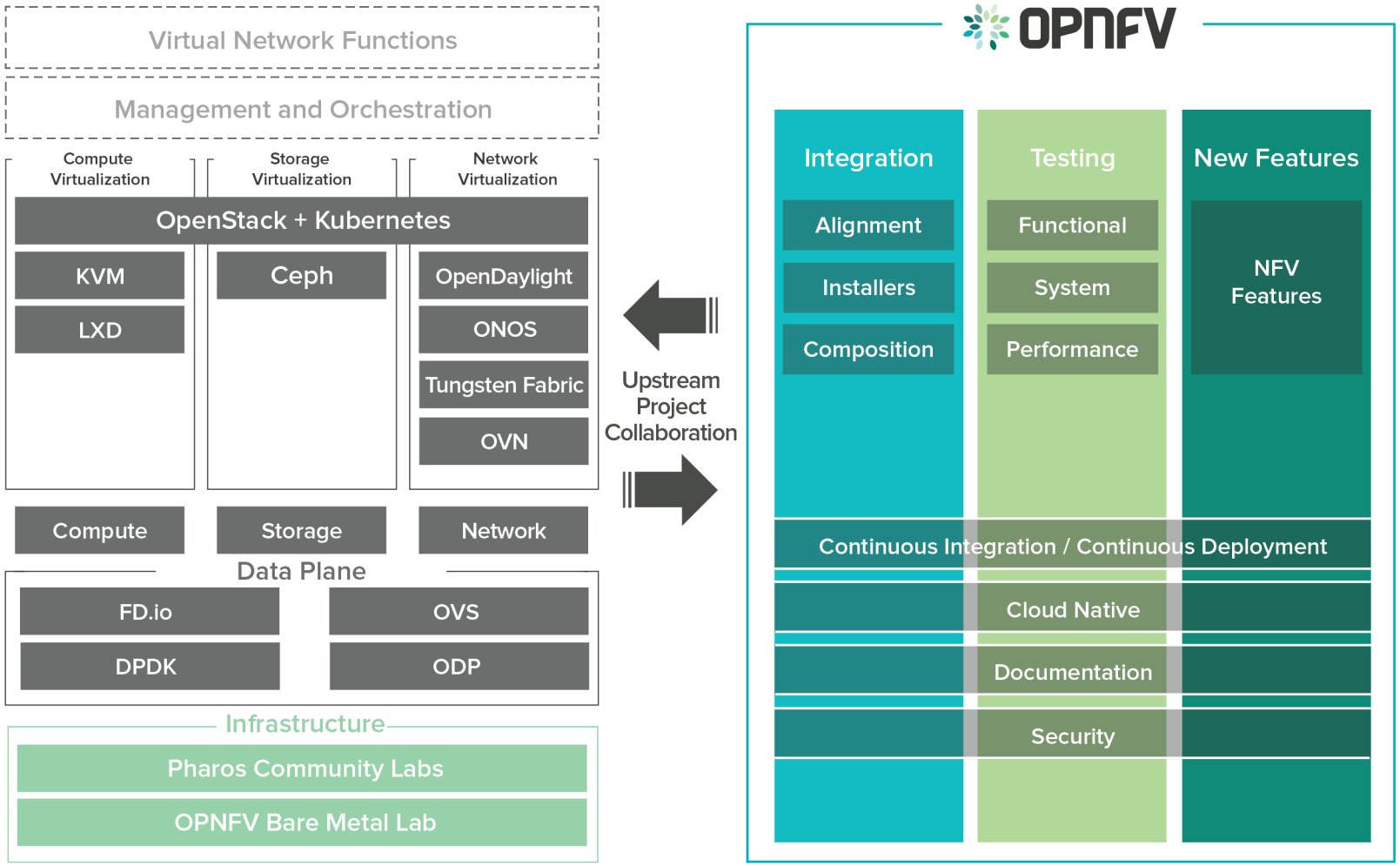
OPNFV NFVI Complexity and Choice



Scope for OVP 2018.08

Functest

- Tempest compute (smoke)
- Tempest identity v2 (smoke)
- Tempest identity v3 (smoke)
- Tempest image (smoke)
- Tempest network (smoke)
- Tempest volume (smoke)
- Tempest Neutron Trunk ports
- Tempest BGPVPN Tempest tests

- Security: Patrole RBAC tests

- OPNFV SNAPS smoke tests

- VNF testing vIMS
- VNF testing vEPC

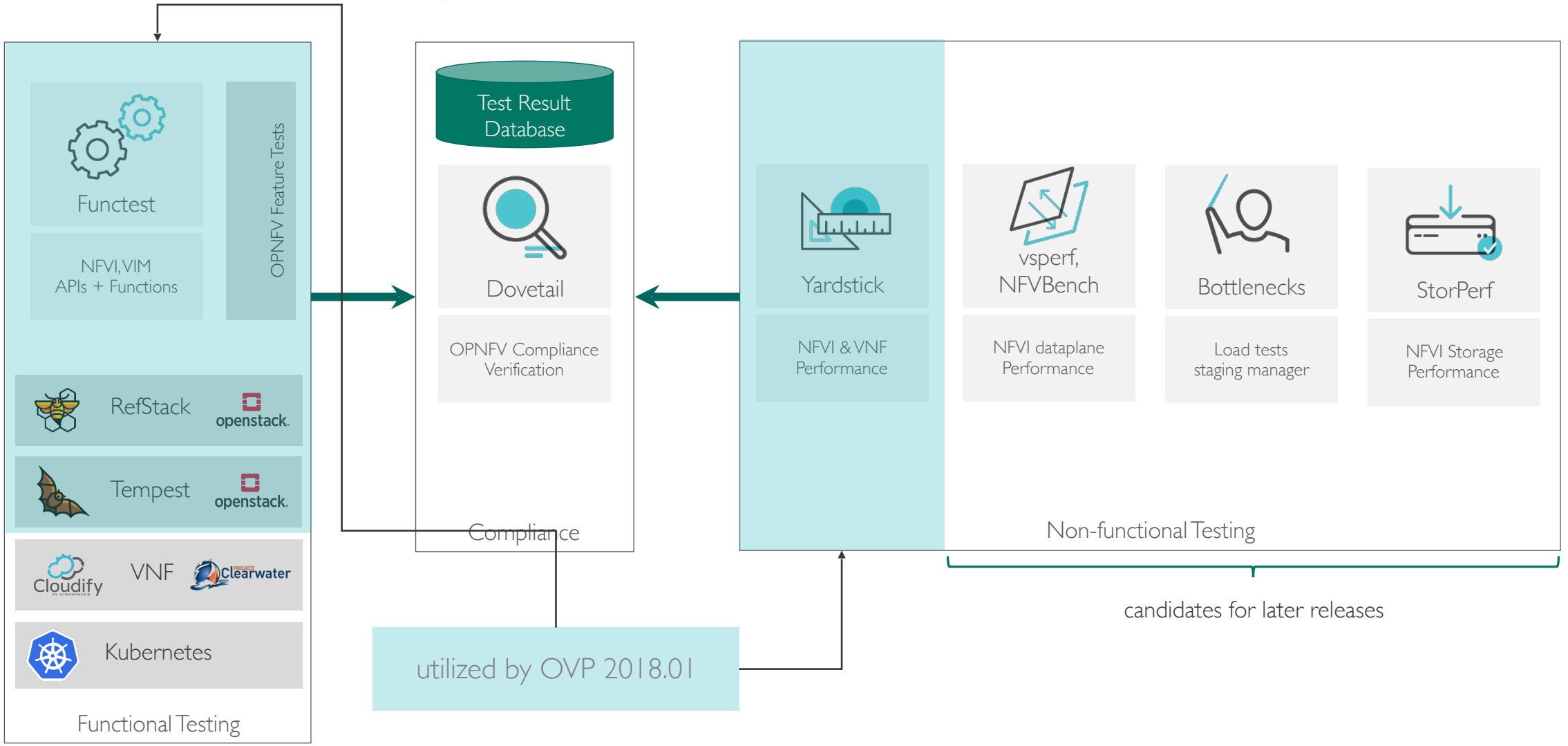
Yardstick

- High-availability of one controller (restart)
- High-availability of message queue
- High-availability of Neutron L3 agent
- High-availability of OpenStack database

Bottlenecks

- Stress testing

OPNFV Test Ecosystem



Feedback Time – Is NFVI Consolidation Feasible?

- Any NFVI Consolidation and related compliance program rests on Service Provider implementation consolidation
- Four years ago – there was not enough agreement amongst service providers to converge on a single NFVI
- Inputs/Next Steps:
  - GSMA NFVI Profiling Work for 5G – Motivating Event?
  - LF Networking EUAG relaunched next week – possible task force focused on this area
- Operator Input: Has the Market Changed? Is this a feasible task?
  - 1, 2, 5, 10 choices as a goal?

Note: It's also true for VNFs as we move forward

- Several Major Options in VNF features required by ONAP
  - Where VNF needs only support one option
  - Lots of subsidiary requirements in that option
  - VNF unlikely to implement multiple options (substantial functionality cost)
  - Option likely long lived (would take >2 ONAP releases to converge)
- Major options identified:
  - VNF Package – HEAT / TOSCA / HELM (+ documentation, preload, etc)
  - Management Interfaces – VFC / Netconf/ Ansible / Chef
  - Life Cycle Operations – SDNC/APPC, VFC, ETSI (SOL003)
- BUT – VNF testing should
  - have Specific meaning / Assurance of quality