

TIP Test & Validation Council Charter

Effective Date: June 26, 2024

Prior to the establishment of the Test and Validation Council, many of the activities described herein were conducted by the TIP Test and Validation Committee, an administrative committee as defined in the TIP Bylaws. Upon the effective date of this charter, the Test and Validation Committee will convert to the Test and Validation Council.

This charter (the "Charter") sets forth the purpose, scope, responsibilities, duties, composition, and procedures of the Test and Validation Council ("TVC"). The TVC is an internal, executive council of TIP, intended to advance TIP's validation, compliance and certification programs, and is not an Administrative Committee as such is defined in the TIP Bylaws.

PURPOSE

The TIP Test & Validation Council ensures consistency and strategic evolution of all test, validation, and certification activities across TIP, including TIP Community Labs and Authorized Labs.

Through its approval and oversight of validation, compliance and certification ("VCC") activities, the TVC is promoting the commercial readiness, and progress toward commercial readiness, of TIP Participant's products/systems/services that have successfully completed VCC activities. The members of the TVC will represent the diversity of TIP Participants.

SCOPE

The Scope of activities that the TVC will be responsible for includes the following:

- Ensuring consistency within Project Group requirements (including subgroups) regarding VCC activities
- Ensuring cross-PG consistency of the VCC requirements developed by each Project Group
- Governing basic quality principles of VCC activities
- Approving Project Group badge criteria to support both commercial readiness and listing on TIP Exchange
- Approving badge allocation for products listed on TIP Exchange
- Overseeing the activities, setting quality assurance and process requirements in the TIP Community Labs, and TIP Authorized Labs
- Receive, review and respond to Authorized and Community Lab project status reports and any technical issues identified by a Lab Host

• Such other activities as may be approved by the TVC which are consistent with this Scope and the TVC's Purpose

The TVC may interact with other organizations or consortia having similar scope to TIP.

TVC STRUCTURE and GOVERNANCE

The TVC is comprised of the TIP Executive Director, Chief Technology Officer ("CTO"), and Head of Operations, plus at least six and up to thirteen individuals representing TIP General and Sponsor Participants. Each TVC member shall have one vote on all matters before the TVC.

The TVC is led by a Steering Committee comprised of the TIP Executive Director, CTO, and Head of Operations. Additionally, the TIP Head of Operations or another member of TIP Staff will facilitate (calendar) TVC meetings, publish (but not create) meeting agenda, materials for consideration, and circulate TVC meeting minutes.

The TIP CTO provides an update of activities within the TVC to the TIP Board of Directors as deemed necessary by the TVC Chairperson.

The TVC may create one or more Subcouncils to accomplish tasks and activities within its Purpose and Scope. The TVC will define the specific scope, tasks, deliverables, meeting cadence, and timeline for each TVC Subcouncil. Each Subcouncil will be comprised of a subset of current TVC members and may include additional TIP Participants on a case-by-case basis. The TIP CTO, with input from other Steering Committee and TVC members, is responsible for clearly defining the scope, deliverables, timelines, and, if appropriate, participation guidelines. The initial Subcouncils of the TVC are:

- (1) Badging and Certification
- (2) Test Process and Automation
- (3) Lab Networks

DUTIES and RESPONSIBILITIES

The following are the specific duties and responsibilities that will support the Purpose and Scope as noted below:

- Develop and maintain processes related to VCC activities across all project groups
- Develop, maintain and review criteria for lab environments
- Create and facilitate TVC Subcouncils to deliver against strategic activities identified by the TVC
- Promote TIP VCC across the industry
- Oversee lab activities, including:
 - Review requests to open new TIP lab environments, and make recommendations to the TIP Executive Director for final approval
 - Provide guidelines to coordinate how labs report their activities
 - Provide input to the TIP Community Lab Policy, and any successor policies, e.g.

a TIP Authorized Lab Policy,

- Define technical and operational quality criteria for TIP community and authorized labs
- Ensure compliance with the TIP Community Lab Policy, or other policies relating to the operation of a TIP-approved, -authorized, or -associated lab.
- Review existing Labs on a regular basis, and make recommendations to the TIP Board of Directors for closures and/or re-purposing to align with TIP PG goals and mission; this includes the right to conduct lab audits
- Oversee VCC activities, including:
 - Review Project Group Deliverables (including test plans, project exit reports, etc.) and provide guidance in terms of consistency of testing across Project Groups
 - Operational test plans developed in the PGs to enable Labs to commercialize as part of a TIP certification program
- Provide approval of allocation of certain TIP badges and certifications, see Appendix A.

TVC Participation & Participant Expectations

TVC Membership:

TVC members should have deep technical expertise in product test, validation, and certification technologies, and are expected to be active, contributing regularly to discussions and decisions of matters before the TVC pursuant to this Charter. Except for the TIP Executive Director, CTO, and Head of Operations, each member of the TVC must be employed by a TIP Participant in good standing (the member's organization has met its financial obligations and is not in violation of any TIP policies).

New members of the TVC may be nominated at any time, so long as each new member meets the membership criteria above and the maximum number of TVC members is not exceeded. The TIP TVC Steering Committee approves all new members of the TVC. No TIP Participant may have more than one voting representative on the TVC at any one time.

A member of the TVC may appoint another individual, employed or affiliated with the same employer as the appointing TVC member, to act as an alternate in its place should the TVC member be unable to attend a TVC meeting. The alternate will have the same rights, privileges and obligations as the TVC member. A TVC member wishing to appoint an alternate must notify TIP's CTO at least 7 days, or as soon as is reasonably feasible, prior to the meeting(s) the alternate will attend. A person appointed as an alternate must also meet the membership criteria described in this Charter.

Resignation; Removal:

TVC members who are unable to fulfill the role of a TVC member shall inform the TIP CTO and resign from the TVC. TVC members will be deemed to have resigned their seat (1) after 3 consecutive, unexcused absences from scheduled TVC meetings in any calendar year; (2) if they are no longer employed by a TIP Participant; or (3) if their employer is no longer a TIP Participant. The TVC Steering Committee may remove a TVC member for acting contrary to the purpose and scope of the TVC, or of TIP.

Decision-Making Process, Meeting Frequency and Reporting¹

The TVC, and any TVC Subcouncil, meets at a self-arranged cadence, usually once a month and more often at the discretion of the TVC and/or TVC Subcouncil members. The TVC will formally review and approve or reject documents related to the scope and activities described above.

Decisions are made by consensus of those TVC members present at a duly-scheduled meeting, with consensus meaning that there is no sustained objection to the action being considered. If consensus cannot be reached, decisions of the TVC shall be made by majority approval of all TVC members. Voting may be performed in person during TVC meetings or via electronic voting, e.g. email or such other platform as may be available. Each TVC member has one vote in decisions made by the TVC.

Review of the Charter

The TVC may periodically conduct its own review of this Charter and update as necessary.

¹ Appendix A contains a decision-making matrix indicating roles and responsibilities amongst the Board, TC, TVC, PG and TIP Leadership Team.

Appendix A Decision-Making Table

| | Board | тс | тус | PG | TIP LT |
|---|-------|---------|---------|------|------------|
| Focus Areas (2+ years) | D | R | | I, P | А |
| Focus Areas (<2 years) | к | D | | I, P | A, R |
| Technology Roadmap | к | D | | Ρ | A, R |
| Final Deliverable Approval | | | | | |
| UCD | | I, R, K | | D | К |
| TRD/dTRD | | К | I | D | |
| Test Plan | | к | D | I, R | A, I |
| Success Criteria / ACD | | | D | I, R | |
| Blueprint / MVS | | К | I | D | |
| Publications (technical papers, blogs, etc) | | К | | D, P | A, I, P |
| PG Formation (incl Charter approval) | D | R, P | | I, P | А, І |
| PG Graduation | D | R, P | | I, P | A, I, R, P |
| PG Re-Charter | D | R, P, I | | I, R | A, I, P |
| PG Subgroup Formation | К | К | | D | A, I, P, R |
| Subcommittee/ Subcouncil Formation | K | R, D, P | R, D, P | | A, I, P, R |
| PG Co-Chair | D, I | R, I | | I, P | A, I, P |
| PG Subgroup Co- Lead | к | К | | D | A, I, P |

| TC Co-Chair | D, R, I | R, P, I | | A, I, P |
|-------------------------|---------|---------|---------|---------|
| TC Subcomm Co- Leads | K, I | D, P, I | | A, I |
| TVC Subcouncil appt | K, I | | K, I, R | D |

Definition of Roles:

Recommender - Responsible for making a detailed recommendation for approval.

Decider - Approves/Denies action, whether recommended by other party or sui generis **Knower** - Informed of decision. Has Veto power

Inputter - May provide feedback, input into a recommended action

Agree - Ensures alignment with legal/regulatory and organizational requirements Performer - Enacts the decided course of action