



**Natcast**



## FAQ

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**R&D PROJECT FUNDING:  
TEST VEHICLE INNOVATION PIPELINE (TVIP)**

**Version: September 12, 2024**



# TVIP Program Overview

**1. Does accepting CHIPS money on specific programs preclude companies from pursuing future CHIPS opportunities?**

No.

**2. Are you or will you be de-conflicting potentially related or overlapping opportunities across the inter-agency space? (i.e. Energy, NSF, EDA)**

We will be attempting to avoid duplicative investments.

**3. What is the amount allocated for the TVIP funding opportunity?**

We anticipate a total of up to \$55M in award funding with 4-12 awards granted. Individual awards are expected to range from \$1M to \$20M.

**4. Is TVIP a single-award contract or multiple awardees?**

We anticipate multiple awardees.

**5. What is the payment model for TVIP awardees?**

Please refer to the Payment Terms in CFP, Section 6.5.

## Timeline

**6. When are TVIP proposals due?**

TVIP proposals are due by Monday, October 21, 2024 by 5:00pm ET. Please refer to the CFP for all milestones and due dates. Visit [www.natcast.org/research-and-development/tvip](http://www.natcast.org/research-and-development/tvip) for the CFP and program details.

## Application

**7. Do applicants for the proposal need to be U.S. citizens?**

The applicant for the proposal must be a legal entity, not an individual person. Teams must pass a research security review, as described in Section 2.4.1 of the Call for Proposals. Please refer to Section 3.5 in the Call for Proposals for additional information on foreign collaborations, as well the CFP notes that “foreign individuals” can participate in an unfunded basis. That reference to “foreign individuals” means persons participating from a foreign location. Non-U.S. citizens whose work will occur

in the U.S., and who are lawfully present and authorized to work in the U.S., are eligible to participate on a funded basis. Please also refer to Section 2.5.1 describing IP ownership by a U.S. entity to comply with domestic control requirements.

**8. We have a mixed company setup part outside of the US, would applying be allowed?**

Entity must have a U.S. presence. Please refer to Sections 2.5.1 (Domestic Control Restrictions) and 3.5 (Foreign Collaboration and Overseas Activities) in the Call for Proposals.

**9. Can a proposer participate in more than one team?**

Yes.

**10. What is the recommended format for Concept Paper submissions?**

As noted on page 2 of the CFP, concept papers must be a maximum of 5 pages and contain the project's title, proposer's team, principal investigators, team point of contact, and estimated budget. The paper may have any format provided this information is included.

**11. Can you please provide insight into the security of the "Application Portal" website?**

Please see the updated CFP, section 4.1, which points to <https://natcast.secure-platform.com/rnd>. This portal is operated by a FedRAMP Authorized company.

**12. We will be having a subaward on this project. Does the subaward institution need to complete their own budget workbook as well?**

We do not require subawardees to submit budgets to Natcast. The prime is expected to manage the subawardee's performance and compliance with flow down clauses. We do reserve the right to perform monitoring activities or conduct audits of the prime and subawardee.

**13. Can a proposer participate in more than one team?**

Yes.

## Programmatic Specifications

### **14. What is a technical focus area?**

A technical focus area is an area in which Natcast plans to accept proposals which will fund the creation of new IP for Test Vehicles. These technical focus areas are listed in the CFP, section 1.2.

### **15. Are these the only areas Natcast and NSTC will create Test Vehicles for?**

Natcast will pursue the creation of additional Test Vehicles as needed in the future if it determines it is appropriate to do so.

### **16. What is a TRL band?**

The TRL bands are listed in the CFP, section 1.1.

### **17. What is the Generation Track?**

The Generation Track is a technical track for the program in which proposers could propose to create new Test Vehicle IP. It is described in the CFP, section 1.4.

### **18. What is the Transition Track?**

The Transition Track is a technical track for the program in which proposers could propose to transition existing IP to Natcast for use by the broader NSTC community. It is described in the CFP, section 1.4.

### **19. is the Generation Track more important than the Transition Track?**

No, neither track is more important than the other.

### **20. Does my Generation Track Proposal have to span all TRL bands?**

No, your proposal does not have to span all TRL bands. However, since the goal is to build a comprehensive pipeline, programs will be evaluated as defined in the CFP section 5.1 and 5.2, and as noted in CFP, section 1.8, generation track proposals will be evaluated against the three TRL bands. Not spanning all TRL bands may impact the evaluation.

**21. What does the TVIP program mean by an advanced facility or a commercial foundry?**

The CFP, section 1.4, task 5 asks proposers to transition their test vehicle to the NSTC. Depending on the precise details of the process flow proposed, this could have different meanings, however, if the proposer is unable to transition the vehicle in a reusable way to the NSTC, then it might not be suitable for this program.

**22. I have a 100 or 200 mm facility that can do sophisticated processing, but not full flow products described in the technology focus areas, how can I get involved?**

The CFP, section 1.1, defines 3 TRL bands for participation in the program. As described in the CFP, such a facility may be appropriate for a TRL 5-6 programmatic band, especially using wafer coring and integration with more complex flows.

**23. I'm a fabless company, how can I get involved?**

The TVIP program is a great opportunity for fabless organizations to get involved in chipmaking research. The CFP, section 1.1, defines 3 TRL bands for prototyping. Fabless companies can partner with firms at one or more of the TRL bands, advanced facilities, or a commercial foundry to respond to the program goals.

**24. If I create a test vehicle in the TVIP and make it available to the NSTC, would I still be able to use it for my own purposes?**

Yes.

**25. What do you mean by transition plan?**

Natcast intends across its programs to create assets for the community and transitioning the test vehicles to the consortium is described in the CFP, section 1.4, Task 5.

**26. I proposed a full array of test vehicles, and some were exceptionally good and others weaker. I'm also worried that many other teams may propose some of the same vehicles. Will my proposal be rejected in its entirety?**

The CFP, section 5.2. addresses selection criteria for test vehicles which includes selection of a subset of proposed test vehicles. Proposers are advised in CFP, section 8.1.7 on how to itemize the costs for individual test vehicles within their proposal.

**27. What technology node should I use?**

The CFP, section 1.4 discusses how teams can choose any route to produce a test vehicle subject to rules on foreign collaboration (CFP, section 3.5) and domestic production (CFP, section 2.6)

**28. Could you please comment on the IP protections for new startups to launch given that data will be shared among the team members ---also related, how do we share data that might be proprietary to different PDKs?**

See Section 2.5 in the Call for Proposals describing ownership of IP, and Intellectual Property and Data Rights. Section 2.5 also describes identifying Background IP that a Performer does not want to make widely available. In terms of sharing proprietary data, Performer may only share proprietary data of others if it has obtained all necessary permissions, licenses, or consents from the rightful owners to share such IP. Additionally, within a team, it is up to the team members to decide how to share IP within the team and under what conditions.

**29. Could you comment on the commitment to IP sharing model with NSTC members without knowing who they might be? Since the goal is to generate valuable IPs and startups, the sharing model can impact value of the IPs.**

The minimum IP requirements for a performer, as well as the preferred terms are set forth in CFP, Section 2.5. Additionally, Performer may propose alternative terms that align with the TVIP program goals.

**30. As a university, we do not hold any IPs, and our designs are not expected to include IPs from foundries. Should we still include an IP management plan in our proposal?**

Yes. See Section 2.5.3 for guidance.

**31. With regard to R&D funding provided by Natcast, is it possible for academic researchers to publish a research article as a result of the funded research?**

Yes. Please refer to Section 2.3 in Call for Proposals.

## Membership

**32. Is there a difference between NSTC and Natcast membership?**

Natcast is the operator of the NSTC, and membership will be to NSTC not to Natcast.

**33. What is the NSTC membership model?**

The Membership program is under development. We will be sharing this information this fall through our website, newsletter, and direct emailing to the community. While entities are not required to be NSTC members at the time of application, Natcast will work with each awardee and subawardee to ensure they are an NSTC member at the time of Award.

**34. Is Natcast a 501(c)(3) nonprofit?**

Natcast is a nonprofit organization.

## Informational Events

**35. Will the Informational Webinar video and presentation be available to the public?**

The TVIP webinar video and presentation have been posted to [www.natcast.org/research-and-development/TVIP](http://www.natcast.org/research-and-development/TVIP).

**36. Will the Proposers' Day video and presentations be available to the public?**

Upon request, Proposers' Day video and presentations will be made available to people interested in the TVIP program.

## Post-Proposers' Day Questions

**37. How do academic licenses impact the TVIP program.**

CFP, Section 1.4, Task 5 requires proposers to transition their test vehicle to the consortium. This may not be compatible with academic license agreements for EDA or 3<sup>rd</sup> party IP (3PIP). Also, CFP, Section 2.5.3 requires, proposers to identify in the Intellectual Property Management Plan any encumbrances on the Deliverables or Related IP (e.g., third party IP) that could affect the obligations of the performer or the rights of Natcast and NSTC members.

**38. How can we account for license costs for EDA/3PIP?**

All costs for EDA/3PIP should be addressed in the proposal and potentially in the IP Management Plan.

**39. Are Microelectronics Commons Hubs eligible to prime proposals?**

Yes.

**40. Can organizations submit more than 4 concept papers?**

Organizations may submit more than 4 concept papers but may only submit 4 proposals.

**41. Can government entities participate in the TVIP program.**

Participation of government entities is addressed in CFP, Section 3.1. Participation is also at the discretion of the entities.

**42. I would like to use an overseas foundry, is that allowed?**

CFP, Section 2.6 and CFP, Section 3.5 address overseas activities. Subject to the rules outlined in these sections, it is possible to use an overseas foundry.

**43. The technology node I am planning to use for a test vehicle is not available in the U.S., but will be in the future, allowing for a shift to domestic production of the test vehicle at a later date. Is that an important consideration?**

CFP, Section 2.6 and CFP, Section 3.5 address overseas activities. Subject to the rules outlined in these sections, it is possible to use an overseas foundry. Should it be possible to transition activities from abroad to the U.S., this can be accounted for within a Domestic Production Plan as outlined in CFP, Section 2.6.

**44. I submitted 1 concept paper that had multiple elements. Can I later split these into separate proposals.**

Yes, however an organization may only be a prime on 4 proposals.

**45. I'm concerned about submitting a high-quality concept paper given the short time frame, what do I do?**

A concept paper is required to submit a proposal. No down-selection will occur, however, all proposers who submitted a concept paper will be able to advance to full proposal if they choose. The concept paper is an opportunity to receive feedback from Natcast either encouraging or discouraging a submission. Concept papers will only be evaluated against the first two evaluation criteria outlined in CFP, Section 5.1. The composition of the team can also change after the concept paper is submitted. The perceived quality of the concept paper has no impact on the ability of the team to submit a highly rated proposal.

**46. For the CMOS+X/BEOL Task, achieving highly rated technology performance metrics at TRL 7 within the budget and the time of the program is a challenge. Could I avoid this entirely?**

Proposers' do not need to propose across all TRL bands for a generation track proposal, but they will be evaluated against all TRL bands. In addition to technology metrics, performers should consider the full array of program goals, including addressing manufacturability, contamination, materials/process compatibility, and others within the metrics framework of threshold, target, and stretch goals as outlined in CFP, Section 1.8.



**47. Is my idea appropriate for the program.**

To receive preliminary feedback on your proposal idea, please submit a concept paper.

**48. Can students or guest researchers who are citizens of countries of particular concern working within the U.S. receive funding.**

Researchers participating on activities funded by TVIP are subject to a research security review as outlined in CFP, Section 2.4. Non-U.S. citizens whose work will occur in the U.S., and who are lawfully present and authorized to work in the U.S., are eligible to participate on a funded basis.

**49. Are the work products primarily test vehicles used for research or technology demonstrations?**

They are primarily test vehicles used for research.

**50. Do concept papers need to be submitted by an Authorized Organizational Representative or can they also be submitted directly by Principal Investigators.**

Concept papers may be submitted directly by any individual who is authorized to agree to the submission terms and conditions on behalf of the organization.

**51. I'm struggling to form a team ahead of the concept paper submission.**

As of 9/12/2024, proposers may now elect to get teaming assistance from Natcast. Proposers should indicate on their concept paper submission that they would like to be connected with other proposers, along with a statement about the type of partners they are seeking. Proposers should also provide the contact information that they want Natcast to share for teaming purposes. Natcast teaming assistance is done at the discretion of Natcast. Natcast will not share the contents of a proposer's concept paper with any other proposer. Please note: Natcast's assistance in teaming and sharing of other proposers' contact information is not an endorsement by Natcast of any entity or the quality of any entity's work; Natcast's teaming assistance is provided as a courtesy to proposers and proposers are responsible for conducting appropriate due diligence on potential team members.