

# TIG Game Rules

## Version 2.0 December 2024

The features, operation and functionality of The Innovation Game is defined by the source code and config (together the “**Specification**”) which can be viewed at:

**Code:** <https://github.com/tig-foundation/tig-monorepo>

**Latest Config:** <https://mainnet-api.tig.foundation/get-block>

For the purposes of determining each party’s benefits and obligations under the TIG Rules, in the event of any conflict or inconsistency between the TIG Rules and the Specification, the Specification shall prevail.

## Rules for Playing the Innovation Game

### Rules for Innovators

- **Before playing The Innovation Game as an Innovator you must read and accept The Innovation Game Terms:** [<https://github.com/tig-foundation/tig-monorepo/tree/main/docs/agreement>]
- To submit an algorithm to The Innovation Game you must first burn a fee (“**Submission Fee**”). The Submission Fee is determinable from the **latest config**

**Latest Config:** <https://mainnet-api.tig.foundation/get-block>

- Innovators **must** make a meaningful improvement to the performance of an algorithm licensed under the TIG Innovator Outbound Game License before submitting the modified version of it to The Innovation Game.
- Algorithms submitted to the Innovation Game **must** be submitted in accordance with the TIG IP Policy: [<https://github.com/tig-foundation/tig-monorepo/tree/main/docs/agreement>]

### Rules for Benchmarkers

- **Before playing The Innovation Game as a Benchmarker you must read and accept The Innovation Game Terms:** [<https://github.com/tig-foundation/tig-monorepo/tree/main/docs/agreement>]
- Only algorithms licensed under the TIG Benchmarker Outbound Game License may be used for benchmarking in The Innovation Game. Benchmarkers must generate and submit a runtime signature along with any solutions found.

- Solutions submitted by Benchmarkers will be random sampled and verified by AWS lambdas.

## **The Innovation Game Obligations to You**

“**Round**” means an elapsed period of time required for the creation of a specified, discrete number of blocks in The Innovation Game. The relevant elapsed period of time for the current round is estimable from the latest config:

**Latest Config:** <https://mainnet-api.tig.foundation/get-block>

Each Round of the Innovation Game will be assigned a consecutive number in sequence.

### **Rewards**

For the current block, the number of TIG tokens available as rewards is determinable from the latest config.

**Latest Config:** <https://mainnet-api.tig.foundation/get-block>

### **Rewards for Benchmarkers**

For the current block, the percentage of rewards available for Benchmarkers is determinable from the latest config.

**Latest Config:** <https://mainnet-api.tig.foundation/get-block>

The Innovation Game rewards Benchmarkers based on their average percentage of qualifiers across challenges. If a Benchmarker has different percentage of qualifiers across challenges an imbalance penalty based on standard deviation of a Benchmarker's percentage of qualifiers across challenges will be applied.

Rewards earned by Benchmarkers in Rounds 1 to 13 inclusive will be transferable by the Benchmarker within five (5) working days after end of Round 13 and rewards earned in each subsequent Round, will be minted subject to vesting within five (5) working days after the end of each such Round.

### **Rewards for Innovators**

For the current block, the percentage of rewards available for Innovators is determinable from the latest config.

**Latest Config:** <https://mainnet-api.tig.foundation/get-block>

Rewards earned by Innovators in Rounds 1 to 13 inclusive will be transferable by the Innovator at the end of Round 13 and rewards earned in each subsequent Round, will be minted subject to vesting within five (5) working days after the end of each such Round.

Newly submitted algorithms are kept private for a certain number of Rounds before being pushed to a branch in the tig-monorepo repository. An algorithm submitted in round  $n$  will be pushed to the tig-monorepo repository at the start of round  $n+x$ , where  $x$  is determinable from the latest config.

**Latest Config: <https://mainnet-api.tig.foundation/get-block>**

### **Standard Rewards**

With respect to algorithm implementations, each algorithm implementation will receive a single "merge point" for each block in which it exceeds a certain threshold of "adoption" by Benchmarkers, where the threshold is determinable from the latest config.

**Latest Config: <https://mainnet-api.tig.foundation/get-block>**

At the end of a Round, for each challenge, an algorithm implementation which has exceeded a certain number of merge points will be merged to the main branch of the tig-monorepo repository, where the relevant number of merge points is determinable from the latest config.

**Latest Config: <https://mainnet-api.tig.foundation/get-block>**

If there are multiple eligible algorithms, the one with the most merge points is selected.

For the current block, the percentage of rewards available for Innovators is divided amongst challenges before being rewarded to algorithms with sufficient level of adoption, pro-rata with their level of adoption by Benchmarkers.

If for a given challenge, the total adoption by Benchmarkers of algorithms with sufficient level of adoption is under a certain threshold, all Standard rewards for that challenge will be divided evenly between the Innovator rewards for other challenges. The threshold is determinable from the latest config.

**Latest Config: <https://mainnet-api.tig.foundation/get-block>**

### **Breakthrough Rewards**

With respect to algorithmic methods which are eligible for Breakthrough Rewards, each algorithmic method will receive a single "merge point" for each block in which it exceeds a certain threshold of "adoption" by Benchmarkers, where the threshold is determinable from the latest config.

**Latest Config: <https://mainnet-api.tig.foundation/get-block>**

At the end of a Round, for each challenge, an algorithmic method that is eligible for Breakthrough Rewards which has exceeded a certain number of merge points will be merged to the main branch of the tig-monorepo repository, where the relevant number of merge points is determinable from the latest config.

**Latest Config:** <https://mainnet-api.tig.foundation/get-block>

If there are multiple eligible algorithms, the one with the most merge points is selected.

For the current block, the percentage of Breakthrough rewards available for Innovators is divided amongst challenges before being rewarded to algorithms with sufficient level of adoption, pro-rata with their level of adoption by Benchmarkers.

If for a given challenge, the total adoption by Benchmarkers of algorithms with sufficient level of adoption is under 100%, unallocated Innovator rewards for that challenge will be allocated to the Bootstrap Rewards (see below).

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### **Bootstrap Rewards**

An algorithm implementation which does not embody an algorithmic method which is eligible for Breakthrough rewards, may only reward the innovator that submitted the algorithm implementation with Standard rewards (subject to satisfaction of adoption thresholds). Because of the absence of a of an algorithmic method that is eligible for Breakthrough Rewards, those rewards will instead be allocated to the TIG treasury and used to bootstrap algorithmic methods development (these are referred to in the Game as “**Bootstrap Rewards**”).