



## Competition Guidelines

These Competition Guidelines summarize the high-level requirements and rules of the Competition.

### **I. COMPETITION OVERVIEW**

The world's rainforests are one of Earth's most iconic and critical ecosystems. The largest rainforests are in the Amazon, Congo Basin, and Southeast Asia, but also smaller rainforests exist in Central America, Madagascar, Australia, India and other places. Although they cover less than 10% of land surface, they host the greatest known biodiversity on our planet. For example, 0.01 km<sup>2</sup> (1 hectare; 2.5 acres) of rainforest can contain more than 750 species of trees, 1,500 species of flowering plants, 400 bird species, and 150 species of butterflies. Despite their importance in supporting life, regulating climate, and housing precious nutrients, rainforests are undervalued.

Although not yet fully discovered, the value of the rainforest stems from its biodiversity. However, the remote sensing and in situ technologies of today – from human ecologists to satellites, from radar to sophisticated spectroscopy – used to identify and catalogue biodiversity cannot operate to scale and gather the detailed data necessary to understand the full ecosystem wealth of the rainforest in sustainable ways. The rainforest is dense, vast, and humid which provide barriers for current technology. Moreover, against a backdrop of short-term economic gains resulting in deforestation, it is a significant challenge to inspire new innovation, investment, and exploration that will provide new understanding and reveal the true potential of the standing forest.

The \$10 million Rainforest XPRIZE is a four-year competition to enhance our understanding of the rainforest ecosystem. The competition challenges teams from around the world to develop technologies to survey rainforest biodiversity and use data to deliver insights faster, cheaper, and in unprecedented detail. The winning team will survey the most biodiversity in at least three stories of a rainforest (emergent, canopy, understory, and forest floor) in 8 hours and use that data to produce the greatest number of new insights after 48 hours. Insights may include,

but are not limited to, new ecological dependencies, biodiversity and climate connectivity, anthropological findings, or sustainable societal interactions with the forest.

The Rainforest XPRIZE incentivizes the development of novel and integrated forms of remote and in-situ technologies needed to advance innovation in biodiversity assessment in accordance with the Convention of Biological Diversity and produce insights about rainforests. These technologies will demonstrate a combination of capabilities including improved survey speed, unmanned or autonomous operations, the ability to survey multiple stories of the forest, and rapid data integration to provide new wisdom about the forest. For the purposes of this competition, the rainforest will be divided into four stories: the Forest Floor, the Understory Layer, the Canopy Layer, and the Emergent Layer (Figure 1).

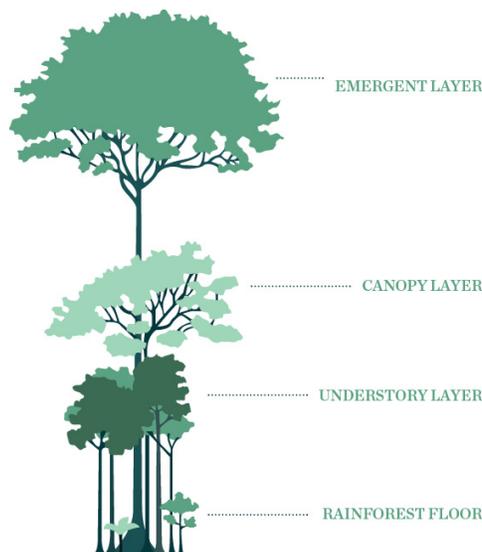


Figure 1: Four stories in a rainforest

Teams will have a limited period of time to explore an area of rainforest and produce: (1) a biodiversity assessment covering at least three of the four stories of the forest; and (2) insights from integrating data to show the value of the standing trees and help inspire the next generation of educators, students, policymakers, and investors to work with local communities to live sustainably with the rainforest.

Teams may also compete for an additional Bonus Prize to incentivize breakthroughs in taxonomic innovations for rapid identification of species. The Bonus Prize will complement the goals of the main competition by incentivizing a related capability: identifying known and new species in a timely manner to rapidly enhance our ability to evaluate biodiversity globally.

## II. PRIZES

The Rainforest XPRIZE Prize Purse totals \$10,000,000 and is divided as follows.

**GRAND PRIZE.** A Grand Prize totaling \$7,000,000 will be awarded to the two (2) teams whose Entries receive the highest scores for biodiversity assessment and number of insights after the Final Round according to the Judging Criteria (Table 2). The First Place Team will receive \$5,000,000 and the Second Place Team will receive \$2,000,000. If there is no Second Place Team, the First Place Team will be awarded the entire \$7,000,000 Grand Prize.

**MILESTONE PRIZE.** A Milestone Prize purse in the amount of \$2,500,000 will be shared equally between up to ten (10) teams whose Entries receive the highest scores for biodiversity assessment and number of potential insights after the Semi-Final Round Testing, according to the Judging Criteria (Table 2).

**BONUS PRIZE.** A Bonus Prize totaling \$500,000 will be awarded to one or more eligible teams in the Final Round whose Entries successfully demonstrate innovations in taxonomy for rapid identification of known species, according to the Judging Criteria (Table 2).

## III. COMPETITION STRUCTURE

### OVERVIEW

The competition will take place in three (3) rounds over 4 years. Following the competition, an additional 2 years will be devoted to amplifying the impacts of the Rainforest XPRIZE. (Table 1)

Table 1: Competition Calendar

19 <sup>th</sup> November 2019	Launch - Team Registration Opens; Competition Guidelines Available for Public Comment
22 <sup>nd</sup> December 2019	Competition Guidelines Public Comment Closes
1 <sup>st</sup> February 2020	Final Competition Guidelines Released
15 <sup>th</sup> April 2020	Rules and Regulations Released
31 <sup>st</sup> May 2020	Early Registration Deadline
30 <sup>th</sup> June 2020	Regular Registration Deadline
1 <sup>st</sup> July 2020	Qualifying Round Begins; Discretionary Late Registration Opens
August 2020	Team and Judges Summit
23 <sup>rd</sup> September 2020	Discretionary Late Registration Closes

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30 <sup>th</sup> September 2020	Technical Document Submission Deadline; Competitors Agreement Deadline
November 2020	Semi-Final Round Teams Announced
November 2020–December 2021	Semi-Final Round Entry Development
January 2022–March 2022	Semi-Final Round Testing and Judging
April 2022	Milestone Award Ceremony; Final Round Teams Announced
May 2022	Bonus Prize Opt-In Deadline
May 2022 – July 2023	Final Round Entry Development
August - October 2023	Final Round Testing and Judging
December 2023	Final Award Ceremony; Winners Announced
January 2024 – October 2025	Scaling Impact

**Note:** *The above dates are subject to change.*

Teams must register by the Regular Registration deadline in order to ensure entrance into the competition. The Competitors Agreement will be provided to registered teams after the Regular Registration deadline. Following the Regular Registration deadline, XPRIZE has sole discretion to register and qualify additional Teams by the Discretionary Late Registration deadline.

Three months after the Regular Registration deadline, each team will submit Technical Documentation detailing their approach and Entry technologies. Therefore, XPRIZE encourages teams to begin designing their technologies at the earliest opportunity. Teams will also include information on how they will use the biodiversity data they plan to collect in conjunction with external data to produce insights that support the sustainable use and well-being of the standing rainforest. Entries and plans must take into consideration the principles contained in the Convention on Biological Diversity. The technical documentation will be judged and the top 40 teams will be invited to participate in the Semi-Final Round of testing. Details of the requirements for the Technical Documentation will be included in the Rules and Regulations. The Competitors Agreement must be signed prior to submission of the Technical Documentation.

In the Semi-Final Round, teams will have 6 hours to demonstrate that their unmanned or autonomous Entry can operate in conditions similar to those found in a rainforest and detect biodiversity in at least one story, which must include the rainforest understory or forest floor. During the testing for the Semi-Final Round, Entries may operate within the forest and up to the maximum altitude at which unmanned aerial vehicles are allowed to operate under existing local regulations at the time and in

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the region of the competition test. The test location(s) (Competition Area) for the Semi-Final Round will be confirmed with teams by XPRIZE at a date prior to testing. Teams will deploy their Entries from a location (Base Station) close to the Competition Area. Teams will submit a biodiversity survey of at least one story of the rainforest and information on the insights they anticipate from such data for judging (see Judging Criteria below) and the top ten (10) teams will be invited to participate in the Final Round of testing.

In the Final Round, teams will have 8 hours to prove that their unmanned or autonomous Entry can operate in real-world conditions in a rainforest and survey biodiversity in at least three stories of the forest. The Final Teams will be required to have team participation from indigenous or local communities, or an academic institution from one or more of the countries that contain a rainforest. During the testing for the Final Round, XPRIZE will designate a Competition Area within the chosen rainforest, reaching from the floor to the emergent layer, and from the emergent layer to the maximum altitude at which unmanned aerial vehicles are allowed to operate under existing local regulations at the time and in the region of the competition. The test location for the Final Round and maximum allowable altitude will be released to teams by XPRIZE at a date prior to testing with sufficient time to allow teams to secure travel logistics. Teams will deploy their Entries from a location (Base Station) close to the designated Competition Area. Following the test, teams will have an additional 48 hours to produce insights from the data collected. Teams will submit a biodiversity survey of at least three stories of the rainforest and the insights produced with this data for judging (see Judging Criteria below).

Teams competing in the Bonus Prize will submit a Technical Document outlining their Entry following the Semi-Final Round. To win, Teams must successfully demonstrate innovations in taxonomy for the rapid identification of known and new species in the Final Round. Registered Teams who are not Finalists for the Grand Prize may still compete for the Bonus Prize.

During each testing Round, teams may deploy multiple systems, vehicles, and other technologies. Further details on system requirements and shipping constraints for this competition will be provided in the Rules and Regulations.

For all tests, teams may not have any humans within the designated Competition Area. However, teams may employ humans outside the Competition Area for:

- Assembly and maintenance of Entry in preparation for testing;
- Technology deployment and recovery;

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- Remote-controlled operations and/or supervision of completely autonomous operations;
- Recharging, swapping, or refilling power sources;
- Receiving data transmissions; and
- Other necessary activities approved by XPRIZE.

Once the Entry reaches the Competition Area, the clock will start. The clock will not be stopped if the Entry leaves the Competition Area for any reason, including returning to the Base Station to refill, swap, or recharge a power source.

There will be no physical connection between humans in the Base Station and the Competition Area. While the Entries must function without a physical link to operators, untethered “connectivity” between the Base Station and the systems are welcome.

Throughout the competition, except during testing, teams are welcome to continue to develop, iterate, and adapt their entries.

Further details regarding testing requirements will be released in the Rules & Regulations.

## **ENVIRONMENT AND SAFETY**

To minimize the impact of the competition on the rainforest environment, Entries must minimize environmental harm and ensure safety of participants and surrounding communities. All teams must comply with the following requirements:

- Teams will comply with all existing environmental, health, and safety regulations.
- Teams must design their systems to avoid impact on all forms of life – flora and fauna. Any emission of acoustic, electro-magnetic, laser, optical or other energy must be compliant with any existing regulations and best practices for the Competition Area.
- Teams may not use nuclear reactor power sources or in any way allow emission of harmful chemical or biological pollutants.
- Teams may not employ, influence or harm any form of life in their approaches to the challenge.
- Teams must recover equipment that is deployed within the Competition Area. Any disposable portions of the system must be declared and accepted by Judges as causing no harm prior to deployment in the Competition Area.

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- Teams must research and obtain any necessary permits for operation in the Competition Area as it pertains to their particular Entry. XPRIZE will collaborate with teams in this activity.
- Valuable insights produced must support the existence and protection of the rainforest.

Additional details on Environment and Safety will be provided in the Rules and Regulations. XPRIZE reserves the right to adjust the Competition Guidelines or Rules and Regulations based on the latest scientific and legal information available at the time to ensure personal and environmental safety. XPRIZE will make all final determinations on safe and acceptable operating conditions for Competition operations.

### **IV. JUDGING CRITERIA**

In order to be eligible for a Prize, teams must meet or exceed all Minimum Requirements summarized in Table 2. Teams will be scored based on performance above the Minimum Requirements as described in the Scoring Methodology.

In each round, teams must submit two items:

- Biodiversity survey data;
- Insights to promote the health of the standing forest.

Teams who have opted to compete for the Bonus Prize will be tested in the Final Round and must submit data demonstrating taxonomic identification speed and accuracy in order to win.

TABLE 2. Summary of Judging Criteria for Testing and Minimum Requirements

Judging Criteria	Semi-Final Round Minimum Requirements	Final Round Minimum Requirements
Number of Species	600 species	1000 species
Forest Stories	One Story	Three Stories
Accuracy – Known Species	50%	75%
Accuracy – New Species	5%	10%
Number of New Insights	5	20
Impact of Insights	N/A	N/A
Identification Speed – Known Species (Bonus Prize)	N/A	125 species/hour
Identification Accuracy – Known Species (Bonus Prize)	N/A	90%

## CRITERIA

The maximum time limit for data collection within the Competition Area for the Semi-Final Round is 6 hours and for the Final Round is 8 hours. Only data collected within this time limit will be allowed.

**BIODIVERSITY SURVEY**: Teams must provide biodiversity survey data of the Competition Area. This survey data will consist of:

- **NUMBER OF SPECIES**: The number of species within a specific area provides a measurable metric on the ecological value of the rainforest. Teams must identify a minimum number of distinct species within the Competition Area to form part of their overall biodiversity survey data. XPRIZE may require that one or more specified area(s) of the Competition Area are included in each Team's survey. Teams will earn additional points by identifying more species.
- **FOREST STORIES**: The rainforest consists of four stories: the Rainforest Floor, the Understory Layer, the Canopy Layer, and the Emergent Layer (Figure 1). During the Semi-Final Round, teams must survey biodiversity in at least one story, which must include the Rainforest Floor or Understory Layer. During the Final Round, teams must survey biodiversity in at least three stories. Teams will earn additional points by surveying all four stories.
- **ACCURACY**: To ensure an accurate biodiversity survey, teams must correctly identify at least 50% of the previously known species in the Competition Area in which teams are operating in the Semi-Final Round, and at least 75% of previously known species in the Competition Area in which teams are operating in the Final Round. Teams will earn additional points by accurately identifying more species.

**INSIGHTS**: Teams must provide new insights to promote the health of the standing forest utilizing data. Teams must use data they collect during their biodiversity survey and are encouraged to combine that with other data to produce these insights. Insights may include, but are not limited to, new ecological dependencies, biodiversity, anthropological findings, climate connectivity, or sustainable societal interactions with the forest. Teams are encouraged to use Artificial Intelligence, Machine Learning, Virtual Reality, Augmented Reality, or any other means by which to gain insights.

- **NUMBER**: For the Semi-Final Round, teams will submit information on a minimum of five insights they expect to have from such data. For the Final Round, teams

will have 48 hours following the data collection to submit a minimum of 20 insights produced with this data. Teams will earn additional points by providing more insights.

- **IMPACT:** The Judging Panel will determine the quality and impact of the insights. The intent of the impact of insights is to show the true ecosystem value of the rainforests and to promote sustainability and preservation of the standing forest. The Judges will score all insights with this intent. Teams will earn more points by providing insights that clearly show the value of sustaining rainforests.

**TAXONOMIC INNOVATION:** As technology improves, new species are being discovered or known species are discovered in different parts of the world. Our ability to rapidly and accurately identify species will aid in understanding our own planet and help to ensure the conservation of life. The Bonus Prize is intended to improve techniques and technologies for rapid and accurate detection of species. The focus here is on known species, however the technologies developed for the Bonus Prize will also be assessed on their applicability to identify new species following the competition.

- **IDENTIFICATION SPEED OF KNOWN SPECIES:** Teams will earn more points for faster identification of a specified number of known species. Further details on this will be available in the Rules and Regulations.
- **IDENTIFICATION ACCURACY OF KNOWN SPECIES:** Teams will earn more points for the accurate detection of a specified number of known species. Further details on this will be available in the Rules and Regulations.

## **V. SCORING**

Teams that meet or exceed all Minimum Requirements will receive a score.

### **Grand Prize and Milestone Prize Score**

The total score for the Milestone Prize and the Grand Prize will be comprised of two components:

- Biodiversity Survey Score; and
- Insight Score.

The intent of this Scoring Methodology is to incentivize teams to demonstrate a truly multi-functional platform for biodiversity assessment and utilization of that data into insights that promote the sustainable use of the rainforest.

Teams best positioned to win will maximize performance on both biodiversity surveying and producing insights. As such, a team that only identifies a minimal number of species, is unlikely to win unless the insights have great impact. Similarly, a team that identifies a very large number of species but only produces a minimum number of new insights is also unlikely to win unless the insights have great impact.

In the event of a tie-breaker, Judges may score the area covered by the biodiversity survey to determine the winner.

### Bonus Prize Scoring

All teams that opt to compete for the Bonus Prize will receive a score. The total score for the Bonus Prize will be based on two components:

- Identification Speed; and
- Identification Accuracy.

The intent of this scoring methodology is to incentivize breakthroughs in taxonomic identification.

Additional details of scoring will be included in the Rules and Regulations.

## **VI. COMPETITION PHASES**

### **REGISTRATION**

Following the prize launch, teams will have six months for Early Registration, and an additional one month until Regular Registration closes. Teams must complete the registration form and pay a registration fee by the appropriate Registration Deadlines as provided in the Competition Calendar (Table 1). The registration fee for teams who register by the Early Registration deadline of 31 May, 2020, is \$1,000 USD. The registration fee for teams who register by the Regular Registration deadline of 30 June, 2020, is \$2,000. XPRIZE has sole discretion to register and qualify additional Teams between 1 July, 2020 and 23 September, 2020 (Discretionary Late Registration deadline). Teams that register during this period must meet all the initial requirements and pay a late registration fee of \$2,500 USD.

### **QUALIFYING ROUND**

Following the close of the Registration phase, teams will submit a Technical Document (15 pages max) describing their Entry, approach for data gathering, the types of insights they expect to achieve, and other technical details in order to achieve the Minimum Requirements (Table 2). The document will be used by the Judging Panel to determine the teams who will move forward to the Semi-Final

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Round of testing. The document is also intended to inform XPRIZE and the Judging Panel about potential operational requirements or risks related to the Competition Area and judging. In the event that more than 40 teams register to compete, the Judges will down-select based on these documents.

The technical documentation will be judged and the top 40 teams will be invited to participate in the Semi-Final Round of testing. Details of the requirements for the Technical Document will be included in the Rules and Regulations.

### **Team and Judges Summit**

Prior to the Technical Document submission deadline, all teams who have registered by August 2020 will be required to attend a Team Summit where they will have an opportunity to interact and collaborate with each other, meet members of the Judging Panel, members of the Advisory Board, as well as other stakeholders. This should be viewed as a preliminary design review (PDR) opportunity and teams should plan accordingly. The PDR demonstrates that the team's Entry design meets system requirements with acceptable risk and within the rules of the competition. The specific date, location, and additional details of the Team Summit will be provided to teams in advance of the event.

## **SEMI-FINAL ROUND**

Teams will have time to develop their Entries and insights until January 2022, when the Semi-Final Round testing will begin. Between January and March 2022, the (up to) top 40 teams will physically demonstrate their Entries. The Competition Area(s) for testing will be determined by XPRIZE in collaboration with the teams in order to minimize travel and shipping. The format of the testing and the order for teams to test will be provided to the teams prior to testing. Each team will have access to a designated Competition Area for up to 6 hours to demonstrate their Entry to the Judges. Teams will have an additional 6 hours to demonstrate how they would produce insights from the data.

Only one team will have access to any specific Competition Area at a time, unless XPRIZE determines an approach to allow multiple teams in the Competition Area at the same time while maintaining safety and fairness for all teams.

## **SEMI-FINAL JUDGING**

Following the Semi-Final Round testing, the Judging Panel will convene to review and discuss the results. The Judging Panel will award points and create a final ranking for teams. Any submission that does not meet the Minimum Requirements

will be eliminated. Up to the top ten (10) teams will move on to the Final Round, sharing the Milestone Prize equally amongst them.

## **FINAL ROUND**

From March 2022 to July 2023, teams will have time to continue development of their Entries and insights. Between August and October 2023, the (up to) top ten (10) teams will physically demonstrate their Entries in an XPRIZE designated Competition Area in a rainforest. The general location in the world for testing will be announced in advance of testing so that teams may make travel, shipping, and other logistical arrangements. However, the exact location of the Competition Area will not be announced until a few days prior to the Final Round of testing. The format of the testing and the order for teams to test will also be provided to the teams prior to testing. Each team will have access to the designated Competition Area for up to 8 hours to conduct their biodiversity survey. Teams will have an additional 48 hours to produce insights from the data.

As in the Semi-Final Round, only one team will have access to any specific Competition Area at a time unless XPRIZE determines an approach to allow multiple teams in the Competition Area at the same time while maintaining safety and fairness for all teams.

XPRIZE will seek to hold testing primarily during daylight hours when possible and when weather conditions are within a specified range, but are expected to be commensurate with typical operating conditions in the rainforest. Teams may not leave vehicles or other equipment in Competition Area unless they have declared what remains in the area in advance to XPRIZE and the judging panel and prior permits, if necessary, have been obtained. The competition intends to incentivize unmanned and autonomous technologies that will return to Base Camp without the use of human-operated assistance. In the event of an accidental loss of an Entry in the forest requiring human-assisted recovery, a team's overall score will be reduced by up to 20% percent. Inability to recover the Entry within a reasonable timeframe will be penalized by the Judges at their discretion. Unless otherwise stated, teams will be responsible for recovery of any Entry lost in the rainforest.

Following the survey, each team will have up to 48 hours for data processing, and to produce and submit the biodiversity survey and insights. Teams will be responsible for processing data. Autonomous, manual, on-site or remote data processing is permitted within the allotted time. Teams may also transmit and process data during the survey testing if they have that capability. The Judges may observe the data processing and production of insights.

## FINAL JUDGING

Following the Final Round testing, the Judging Panel will convene to review the submissions and discuss the results and determine the winners of the Grand Prize and the Bonus Prize. The Judging Panel will award points and create a final ranking for teams. Any submission that does not meet the Minimum Requirements will be eliminated. The winning team(s) will be announced in the Final Award Ceremony.

## MILESTONE PRIZE AWARD

The \$1 million Milestone Purse will be split evenly among up to ten (10) finalists after the Semi-Final Round. Awarding of the Milestone Prize Purse will take place as soon as possible following announcement of the finalists. Finalists will be selected by the Judging Panel in accordance with these Competition Guidelines and the Rules and Regulations.

## BONUS PRIZE AWARD

Teams who opt to participate in the Bonus Prize will be required to submit data in accordance with the Guidelines and Rules and Regulations. The winning team(s) will be announced during the Final Award Ceremony. If the Judging Panel determines that no team was able to address the Bonus Prize competition criteria, the top two (2) teams with the most promising technologies may be awarded the Prize Purse in order to continue technology development.

## AWARDS CEREMONY

Following the final judging, an awards ceremony will take place, at which the winner(s) will be announced and the Grand Prize will be awarded. The 1<sup>st</sup> place team will be awarded a \$5 million prize; the 2<sup>nd</sup> place team will be awarded a \$2 million prize. The Bonus Prize of \$500,000 will also be awarded at this time.

## VII. ROLES AND RESPONSIBILITIES

### ADVISORY BOARD

- A. SELECTION OF ADVISORS.** XPRIZE will appoint a panel of topical experts and big-picture thought leaders to serve as the “Advisory Board” (AB) for the Competition. The AB will remain in place throughout the Competition to advise XPRIZE regarding the scientific and other elements of the Competition.
- B. INDEPENDENT ADVISORY BOARD.** The AB will be independent of XPRIZE and all teams and team members. No Advisor, nor any member of the Advisor’s immediate family, shall participate, nor have any financial or other

material interest, in XPRIZE, the Sponsor(s), and/or any team or team member. All members of the AB shall promptly disclose to XPRIZE any such current, former, or expected future conflict of interest with XPRIZE, the Sponsor, or any team or team member.

- C. ROLE OF ADVISORY BOARD.** The duties and responsibilities of the AB may include, but not be limited to: (i) assisting with the establishment of qualifications for prospective Judges; (ii) recommending members of the Judging Panel; (iii) assisting with development of testing protocols and judging criteria; (iv) and providing input toward the development of these Competition Guidelines.

## **JUDGING PANEL**

- A. SELECTION OF JUDGES.** The “Judging Panel” (as defined in the Competitors Agreement) will be comprised of highly qualified and impartial Judges with subject matter and technical expertise. XPRIZE will propose Judging Panel candidates to the AB for its review and consideration. The AB will recommend the candidates it believes are best suited to serve on the Judging Panel. XPRIZE will secure the judging panel based on the AB recommendations.
- B. INDEPENDENT JUDGING PANEL.** The Judging Panel will be independent of XPRIZE, the Title Sponsor, any other Sponsors, and all teams and team members. No Judge, nor any member of Judge’s immediate family, shall participate, nor have any financial or other material interest, in XPRIZE, the Sponsor(s), and/or any team or team member. All members of the Judging Panel shall promptly disclose to XPRIZE any such current, former, or expected future conflict of interest with XPRIZE, the Sponsor, and/or any team or team member.
- C. ROLE OF JUDGING PANEL.** The duties and responsibilities of the Judging Panel will include, but not be limited to: (i) evaluating teams’ compliance with the Competitors Agreement as they relate to prize operations, these Competition Guidelines, and the Rules and Regulations for the purposes of the Competition; and (ii) the awarding of points and selection of teams that will proceed to each subsequent round of the competition.
- D. GROUNDS FOR JUDGING PANEL DECISIONS.** Official decisions made by the Judging Panel will be approved by a majority of the Judges that vote on each such decision after careful consideration of the testing protocols,

procedures, guidelines, rules, regulations, criteria, results, and scores set forth in the Competitors Agreement, these Competition Guidelines, Rules and Regulations, and all other applicable Exhibits to the Competitors Agreement. If any vote of the Judges results in a tie, then the Judging Panel shall determine, in its sole and absolute discretion, the mechanism to settle the tie. Similarly, if one or more teams are tied at any stage during the competition, the Judging Panel shall have the sole and absolute discretion to settle the tie.

**E. DECISIONS OF JUDGING PANEL ARE FINAL.** The Judging Panel shall have sole and absolute discretion: (i) to allocate duties among the Judges; (ii) to determine the degree of accuracy and error rate that is acceptable to the Judging Panel for all competition calculations, measurements, and results, where not specified in the Rules and Regulations; (iii) to determine the methodology used by the Judging Panel to render its decisions; (iv) to declare the winners of the competition; and (v) to award the prize purses and other awards. Decisions of the Judging Panel shall be binding on XPRIZE, teams, and each team member. XPRIZE and teams agree not to dispute any decision or ruling of the Judging Panel, including decisions regarding the degree of accuracy or error rate of any competition calculations, measurements, and results. Teams shall have no right to observe other teams' testing or evaluation, or to be informed of other teams' calculations, measurements, and results, unless such information is made publicly available by XPRIZE.

## **VIII. INTELLECTUAL PROPERTY**

Teams will own their Intellectual Property on any technology or data integration techniques and processes they develop as part of their competition Entry. XPRIZE will adhere to the Convention on Biological Diversity, national or international regulations regarding ownership of the data (biological or otherwise) and insights produced as part of the competition. If none such regulations pertain to the data collected during the course of the competition, XPRIZE will retain ownership of such data and insights. These data and insights will only be released following the conclusion of the competition to interested stakeholders who have demonstrated a commitment to preserving rainforests, and who will be incentivized to sustain the forest. Please see the Competitor Agreement for additional details on Intellectual Property.