

XPRIZE

ADULT LITERACY XPRIZE



ADULT LITERACY XPRIZE TEAM SOLUTIONS PHASE GUIDELINES

**Version 3
November 12, 2015**

Table of Contents

Competition Guidelines	3
Competition Overview	3
Competition Structure.....	3
Literacy Assessments and Scoring	4
Prize Purses	4
Grand Prize	4
Achievement Prizes.....	4
Cities Deployment Participation	4
Cities Deployment Prize	4
Competition Timeline.....	5
Competition Phases	5
Phase 1 – Team Solutions Phase.....	5
Phase 2 – Cities Deployment Phase.....	5
Phase 1 – Team Solutions Phase	6
Team Registration	6
Stage 1 – Solution Development.....	6
Stage 1 Judging	6
Stage 2 – Field Testing	6
Stage 2 Judging	6
Phase 1 Award	7
Phase 1 Field Test Protocol	7
Phase 1 Field Test Application Environment.....	9
Phase 1 Criteria.....	9
Stage 1 Solution Development Judging	9
Stage 2 Field Testing Judging	11
Phase 2 – Cities Deployment Phase.....	13
Leaderboards	13
Measurement and Validation Team	13
XPRIZE Advisory Boards and Judging Panels.....	13
Selection of Advisors.....	13
Advisory Board	13

Independent Ethics Advisory Board	13
Judging Panel.....	14
Role of Judging Panel	14
Grounds for Judging Panel Decisions	14
Decisions of Judging Panel Are Final.....	14

Adult Literacy XPRIZE

Team Solutions Phase Guidelines

Version 3, 2015-11-12

THE BARBARA BUSH FOUNDATION ADULT LITERACY XPRIZE PRESENTED BY DOLLAR GENERAL LITERACY FOUNDATION IS GOVERNED BY THESE TEAM SOLUTIONS COMPETITION GUIDELINES. PLEASE SEND QUESTIONS TO Adult.Literacy@xprize.org AND JOIN THE CONVERSATION ON OUR FORUM AT <http://forum.xprize.org/c/adult-literacy-xprize>.

THE XPRIZE FOUNDATION MAY REVISE THESE GUIDELINES DURING THE COURSE OF THE COMPETITION TO PROVIDE ADDITIONAL INFORMATION OR TO IMPROVE THE QUALITY OF THE COMPETITION. THERE MAY ALSO BE UNANTICIPATED ISSUES THAT WILL REQUIRE MODIFICATIONS TO THIS DOCUMENT. THE XPRIZE FOUNDATION RESERVES THE RIGHT TO REVISE THESE GUIDELINES AS IT, IN ITS SOLE DISCRETION, DEEMS NECESSARY OR DESIRABLE. REGISTERED TEAMS WILL BE NOTIFIED OF ANY REVISIONS.

Competition Guidelines

These Competition Guidelines describe the high-level requirements, implementation plans, and rules of the Team Solutions Phase of the Adult Literacy XPRIZE Competition.

Competition Overview

The Adult Literacy XPRIZE is a competition to develop smartphone/phablet software that allows adults in the United States to teach themselves to read or to improve their reading ability. Fifteen Semifinalists will be selected from all entries, and each Semifinalist's software will be field tested by approximately 800 adults in three U.S. cities. The field testers will include both native English Language Speakers (ELS) and English Language Learners (ELL). The software will run on smartphones/phablets owned and provided by the field test participants. After six months of field testing the Judges will select five Finalists to continue for another six months.

Each Finalist team will receive a \$100,000 Prize. Prizes will also be awarded to all Finalists producing significant improvements in literacy, and a Grand Prize will be awarded to the team whose entry produces the greatest gains greater than one Educational Functioning Level (EFL). In a second phase, eligible Finalists will have their software distributed by U.S. cities. A prize will be awarded to the city that has the greatest percentage of its low-literacy population download and use the software.

Competition Structure

The Adult Literacy XPRIZE is a software competition divided into two Phases, a Team Solutions Phase and a Cities Deployment Phase. During the Team Solutions Phase, registered Teams will have 12 to 15 months to develop smartphone/phablet software to teach literacy to adults in the United States. A panel of Judges will select up to 15 Semifinalists from all entries submitted. Those Teams will each have their software field tested for 6 months by approximately 800 adults in three U. S. cities. A pre-test will evaluate participants' literacy level before the Field Test begins. After 6 months a second judging round will select up to 5 Finalists to continue in the Field Test, and those Finalists will each receive a \$100,000 Prize. After 6 more months the participants assigned to the Finalist teams will take a post-test to measure overall literacy gains.

Participants will be assigned to the ELS or the ELL demographic groups based on survey data collected at the pre-test. The \$3 million Grand Prize will be awarded to the team whose software produces the greatest gains in literacy over the entire 12-month field test, provided those gains are at least equivalent to one EFL level of

improvement. Achievement Prizes of \$1 million each will be awarded to the Teams showing the greatest gains in each of the two demographic groups (ELS and ELL).

The Cities Deployment Phase of the competition will begin with recruitment of cities during the Team Solutions Phase field test. Finalist Teams that achieve gains of at least one NRS EFL level in each of the two demographic groups will share a Cities Deployment Participation incentive. Their software will be made available to participating cities, and those cities will implement recruitment programs to encourage low-literacy adults to download and use that software. The Cities Deployment Prize will be awarded to the city with the greatest percentage of low-literacy adults downloading and using the Finalist software.

Literacy Assessments and Scoring

Pre-test and post-test literacy assessments will be made using an accepted standardized testing protocol, such as the CASAS, TABE, or other instruments. The examples in these Guidelines use CASAS scale scores for illustration, but other instruments may be used in actual testing. Participants will be administered a pre-test at the start of the Field Test and a post-test at the end of it. The Field Test will include both ELS and ELL participants, and both populations will be scored using the same test instruments.

To be eligible for any Prize award, a Team must meet a minimum performance threshold of an average gain of 10 CASAS scale scores or equivalent. This gain is approximately equal to one U. S. Department of Education National Reporting System (NRS) Educational Functioning Level (EFL). In these Guidelines the term “one EFL level” refers to an increase of 10 points in the CASAS score (or an equivalent gain in a different test instrument), even if the start and end points of a specific increase fall within the same EFL.

Prize Purses

Grand Prize

The Grand Prize of \$3 million will be awarded to the Team that can demonstrate the greatest literacy gains of its field-test participants over 12 months as measured by the pre-test and post-test.

Achievement Prizes

Two Prizes of \$1 million each will be given to the Teams that can demonstrate the greatest literacy gains by their field-test participants over 12 months in one of each of the two demographic groups as measured by the pre-test and post-test. The two groups are:

English Language Speakers (ELS) – This target demographic represents native speakers of English, aged 18–64, whose literacy skills are at or below the NRS EFL Beginning Basic Education level, with, for example, a pre-test CASAS score of 210 or below.

English Language Learners (ELL) – This target demographic represents non-native speakers of English, aged 18–64, whose literacy skills are at or below the NRS EFL Low Intermediate ESL level, with, for example, a pre-test CASAS score of 210 or below.

Cities Deployment Participation

A \$500,000 Cities Deployment Participation incentive will be split equally among any of the Finalists that surpass the minimum performance benchmark, the equivalent of one full Educational Functioning Level (EFL) in both demographic groups. Their solutions will be made available at no charge during the Cities Deployment Phase of the competition.

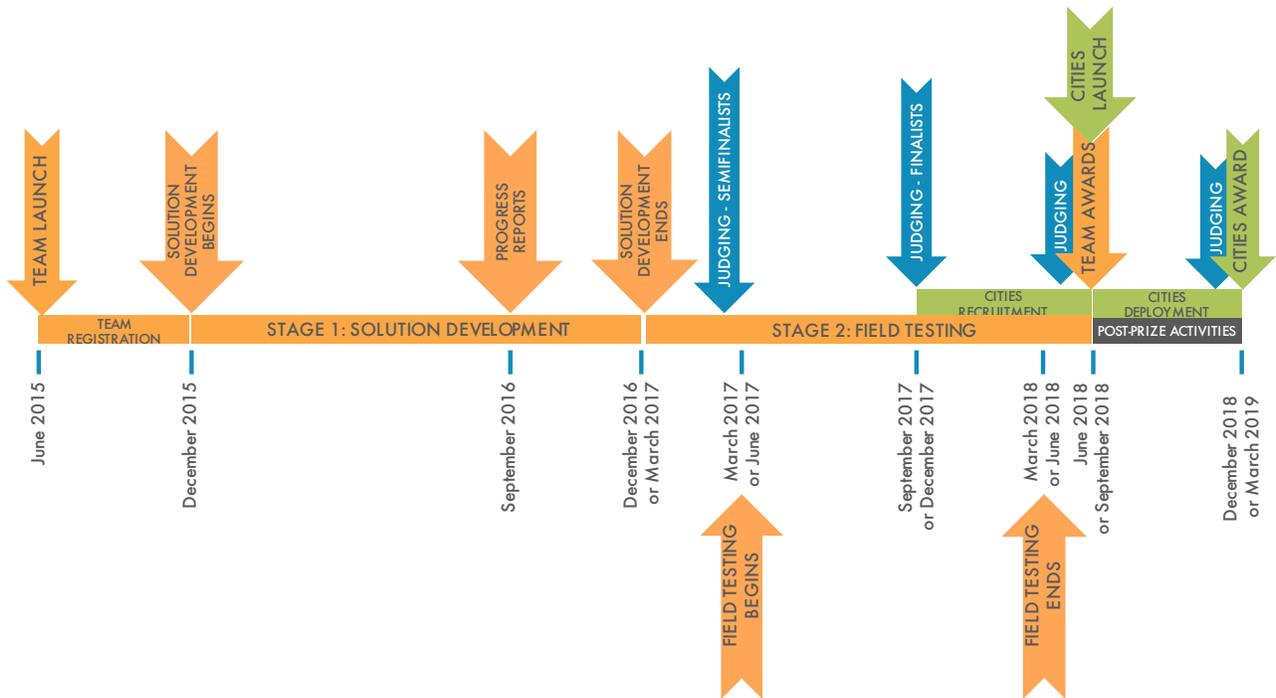
Cities Deployment Prize

The Cities Deployment Prize of \$1 million will be awarded to the city or consortium of cities that can demonstrate the greatest percentage of solution downloads and use by their adult residents with low literacy skills over a six-month competition period.

Competition Timeline

The Adult Literacy XPRIZE timeline is 48 months from launch to the Cities Deployment Phase award event. The full timeline is described in Figure 1 below.

FIGURE 1. Adult Literacy XPRIZE Timeline



Competition Phases

The Adult Literacy XPRIZE competition will be held in two separate but overlapping phases. Each phase is divided into stages.

Phase 1 – Team Solutions Phase

- Team Registration
- Stage 1 – Solution Development
- Stage 1 Judging
- Stage 2 – Field Testing
- Stage 2 Judging
- Phase 1 Award

Phase 2 – Cities Deployment Phase

- Cities Recruitment
- Stage 1 – Cities Deployment
- Stage 1 Judging
- Phase 2 Award

Phase 1 – Team Solutions Phase

During the Solution Development stage, Teams will create software solutions that meet the competition requirements.

Team Registration

Team Registration begins immediately after announcement, and Teams have 6 months in which to register.

Stage 1 – Solution Development

December 2015: Registration closes, and Teams begin or continue solution development.

September 2016: All Teams must submit a detailed status report describing their progress to date and their readiness to begin the Field Test 3 months later. The Judges will then announce whether they will extend the Solution Development phase an additional 3 months.

Stage 1 Judging

December 2016 (March 2017): Each Team will provide XPRIZE with its Technical Submission (see page 9, Stage 1 Solution Development Judging), which will be reviewed and assessed by the Judging Panel. This judging phase will last 3 months, after which the Judges will select up to 15 Semifinalist Teams based on the Competition Criteria.

Stage 2 – Field Testing

March 2017 (June 2017): Field Testing will begin immediately after Stage 1 Judging has concluded and the Semifinalist Teams have been chosen. This Stage will last 12 months, divided into two 6-month periods. Each Semifinalist Team will be assigned approximately 800 participants who will begin using their software. All Semifinalist and Finalist Teams will make their software available to the participants in the Field Testing Stage, and XPRIZE will manage all aspects of the Field Test.

At the beginning of the Field Test Stage, the reading skills of all participants will be assessed using standardized reading tests. Demographic survey data will be collected and each participant assigned to one of the two demographic groups. Each participant will be assigned a unique identifier to be used in the second set of tests administered at the end of this Stage.

September 2017 (December 2017): After the first 6 months of the Field Test, XPRIZE will collect data from participants and from each Team, and Teams will present an updated Technical Submission package. The Judges will evaluate the data and the Technical Submissions and select up to 5 Finalists. Each Finalist Team will receive a \$100,000 Finalist Prize.

Stage 2 Judging

March 2018 (June 2018): At the end of the Field Test, XPRIZE will retest the adult learners via the same instruments used in the pre-test. Only those participants assigned to the five Finalist Teams will be tested. The difference in the participants' pre-test and post-test scale scores will be calculated. As much as possible, post-testing will occur at the same sites as pre-testing and utilize identical testing methodologies and events, although the actual content of the test instruments may be different. The Judging Panel will analyze the results of the pre-test and post-test, the continuous monitoring and assessment data, and the monthly survey data collected from each learner.

Learning gains will be measured by comparing field-test participants' pre-test and post-test scale scores. The minimum performance benchmark is set at 10 scale scores above the initial scale score of each participant. NRS has defined 10 scale scores as the approximate equivalent of one EFL. Teams must demonstrate that the mean learning gains of their adult field test participants, over a 12-month period, increased by at least 10 scale scores.

The winning Team will produce the greatest learning gains in the entire field test population. Achievement Prizes will be awarded to the Teams that produce the greatest learning gains in one of the two target demographics as described above.

Phase 1 Award

June 2018 (September 2018): The Team Solutions Phase award event will be designed to capture the hearts and minds of adults, families, communities, educators, and governments in the United States and around the world. The winning Team(s) will be announced at an event that celebrates the successes of the Finalist Teams and showcases the winning technologies.

Phase 1 Field Test Protocol

XPRIZE will recruit up to 12,000 adult learners for the Field Test in three large U.S. cities. Potential attrition and eligibility factors require XPRIZE to recruit more learners than needed to begin the competition and measure statistically significant differences between Teams.

Adult participants will be assessed using standardized reading pre-tests to determine baseline skill levels. The following process and methodology will be used for baseline testing:

XPRIZE will develop agreements with local testing centers for use of their space, computers, and proctors for the participant pre-testing and post-testing.

The CASAS computer adaptive test (CAT), or a similar electronic standardized test, will be used.

XPRIZE will predetermine testing parameters, such as how much time may be allotted to pre-tests, so the events can be uniform. The events must be identical for pre- and post-testing.

XPRIZE will provide each testing center with individual adult participant identifiers, providing test security and adult participant privacy.

The participant pool will comprise two demographic targets – English Language Speakers and English Language Learners, aged 18 to 64, with CASAS pre-test scores of 210 or below, or equivalent scores on a comparable instrument.

XPRIZE will determine the eligibility of potential adult participants for field testing based on the following criteria:

Age: 18 to 64

Literacy Level: A CASAS adaptive reading test scale score of 210 or below, or equivalent score on a comparable test instrument

Device: Owns a smartphone or phablet running Android 4.0 or higher

Instruction: Not currently engaged in literacy instruction, and not planning to receive help from professional tutors or engage in formal educational training programs other than the solution provided by XPRIZE as part of this competition.

Additional demographic information will be collected from the potential participants at the time of baseline testing. This may include the following information:

- Names (first and last)
- Age
- Gender*
- Native vs. non-native speaker
- Predominant language spoken*
- Ethnicity*
- Phone number
- E-mail address
- Physical address*
- Smartphone/phablet information

**Optional*

Eligible participants will be randomly assigned to one of the 15 Semifinalist Teams selected for the Field Test Stage. Random assignment methodology will be stratified, taking into consideration target demographics and geographic location, as well as pre-test scores. XPRIZE will ensure a fair distribution of participants among the teams and take into account any variables that could unfairly impact the Teams or skew the results of the competition.

Outside educational assistance could skew the results of the competition. To eliminate this variable, eligible participants will be expected to not take other literacy classes, receive help from professional tutors, or engage in formal educational training programs other than the solutions assigned by XPRIZE in the competition during the Field Test Stage. Adults currently enrolled in literacy education programs will not be recruited as test participants. To assess the level of outside instruction a participant may be receiving during the Field Test, if any, XPRIZE will administer online surveys of the participants. Participants will not be terminated from the Field Test if they become engaged in other literacy education programs; however, the Judging Panel may decide to exclude such participants' test results for scoring purposes. The Judging Panel will only use this survey data to determine if participant data needs to be removed from the data pool.

Teams will provide their solutions to their assigned adult learners and will give each participant a secure login ID for identification purposes. The Field Test will run for 12 months, and during that period each Team's software may collect usage data to inform improvements and bug fixes. In addition, each Team will be required to collect certain usage data in a standard format specified by XPRIZE. This standard data will be made available to researchers and the public after the completion of the Field Test. Required data may include, but will not be limited to:

- Minutes of software use per day
- Times of day the software is used
- Local usage context (location, activity)
- Social network measurements from in-app network features

Teams may collect whatever other anonymous usage data they wish. XPRIZE will provide a protocol for uploading data to its servers, and Teams must deliver all data collected to XPRIZE.

After the first 6 months of the field test, the Judges will use the required data collected, each Team's additional data collected, and each Team's updated Technical Submission to choose up to 5 Finalist Teams.

Phase 1 Field Test Application Environment

All participants will have smartphone/phablet devices running the Android operating system. All devices will be required to have voice service to ensure they are portable devices the participants will carry regularly. No further device constraints will be imposed, although Teams can expect devices will be relatively low cost and will not include large, full-size tablets. XPRIZE will collect and provide demographic data about the community from which the participants are selected, and Teams will be able to collect actual device data during the Field Test.

Devices will be running Android 4.0 or newer, and Teams can expect considerable variety among devices. Teams are permitted to provide their solutions using whatever technologies they prefer. Solutions may be native apps, hybrid apps, or mobile-optimized Web sites. Participants will be allowed to use their apps whenever and wherever they wish, but may not have high-bandwidth Internet access at all times.

In order to encourage the development of a community of literacy learners, ***all entries must include a social networking component***. Teams may develop whatever tools and technologies they wish, or integrate with existing networks. The social networking component is intended to:

- Allow adult learners to create “connections” with other adult learners using the same programs
- Allow adult learners to communicate with each other (via text, audio, or video) to provide support, share stories, or answer questions, for example

There will be no specific criteria imposed on the design of this component. The solutions selected as Finalists will have the effectiveness of this feature demonstrated in the field test results.

Phase 1 Criteria

It is critical that solutions meet basic parameters to ensure their usability, effectiveness, and scalability. The following describes the criteria for the competition’s Stage 1 (Solution Development) and Stage 2 (Field Test) Judging.

After 9 months of Solution Development (September 2016), Teams will submit detailed status reports and the Judges will decide whether to extend this Stage for 3 additional months. Each Team’s report and readiness to proceed will be used only to determine whether the Stage will be extended. A Team’s readiness to proceed at this point will not be a factor in the Solution Development Judging, as all Teams will have the same amount of time to develop their Entries.

Stage 1 Solution Development Judging

In December 2016 or March 2017, depending on whether this Stage is extended, each Team will provide XPRIZE with its Technical Submission. All Technical Submissions will be reviewed and assessed by the Judging Panel. Technical Submissions must include and will be judged on the following specifications, diagrams, and prototypes as follows:

Design Specifications – Teams will describe the “look and feel” of the interface.

Technical Specifications – Teams will describe how they have implemented their Entry.

Design Documentation – Teams will provide all relevant design documentation to the Judging Panel so it may evaluate the Team’s approach and implementation. Such documentation may include wireframes, mockups, architecture diagrams, and any other information Teams wish to include.

Technical Requirements Report – Teams will describe conformance with all XPRIZE technical requirements (i.e., hardware, software, operating system).

Complete Software Submittal – Teams will provide a fully functional release of the solution they would immediately deploy in the Field Test. This release must:

- o Provide functionality on any device permitted in the Field Test
- o Demonstrate appeal and relevance to adult learners
- o Exhibit usability by an adult learner with skills at the baseline for the competition

Testing – Software test methodology and results used by the Team in developing their Entry.

TABLE 1. Stage 1 Scoring Criteria

PARAMETER	MEASUREMENT	SCORING
Specifications, diagrams, and preliminary test results, if available	Teams will describe / document: The “look and feel” of the interface such that it has a feasible, concrete means of addressing adult literacy skills. Preliminary beta test methodology and results	50%
Complete Software Submittal	Teams will provide a fully functional release of the solution they would immediately deploy in the Field Test. This release must: o Provide functionality on any device permitted in the Field Test o Demonstrate appeal and relevance to adult learners o Exhibit usability by an adult learner with skills at the baseline for the competition	50%
Compliance with all XPRIZE solution development requirements	Teams must demonstrate compliance with hardware, operating system, and data requirements, such that: Solutions are accessible from any smart device specified for the competition. XPRIZE will receive identical copies of data on its server for validation purposes.	PASS/FAIL
Evidence of assessment and continuous monitoring capabilities built into software	Teams must demonstrate functional assessment and continuous monitoring tools.	PASS/FAIL
Evidence of a social networking component	Teams must demonstrate a functional, in-app social networking component.	PASS/FAIL

Stage 2 Field Testing Judging

The 15 highest-scoring Teams that meet all threshold requirements will become Semifinalists and advance to the Field Test stage of the competition March 2017 (June 2017).

After 6 months of the Field Test, Teams will submit an updated Technical Submission and any data they have collected demonstrating the success of their Entry. The Judges will evaluate these Technical Submissions, the Team’s data, and the required usage data. They will select up to five Finalists based on that information, and those Finalists will each receive a \$100,000 Prize.

After the final 6 months of the Field Test, the participants using the Entries from each of the five Finalists will be tested for literacy gains as described earlier. The Judges will collate and evaluate this data and announce the Grand Prize and Achievement Prize winners three months after the Field Test ends, in March 2018 (June 2018).

The Judging Panel will review results of the Field Testing based on the criteria in Table 2 below.

TABLE 2. Field Testing Measurement Scoring Criteria

PARAMETER	MEASUREMENT	SCORING
Evidence of greatest difference between pre- and post-test means of field-test participants’ CASAS scale scores in both demographics	The winning Team for the Grand Prize will be determined by calculating the difference between the mean CASAS scale pre-test and post-test scores of Teams’ adult participants. The team with the greatest difference - above a minimum score increase of 10 - between pre- and post-test means will win the Grand Prize.	Number of scale scores above the minimum benchmark of a mean increase of 10 scale scores
Evidence of greatest difference between pre- and post-test means of field test participants’ CASAS scale scores in either the ELL or ELS demographic	Winning Teams for the Achievement Prizes will be determined by calculating the difference between the mean CASAS scale pre- and post-test scores of Teams’ adult participants. The Team with the greatest difference in each of the two target demographics – English Language Speakers and English Language Learners – will win one of the two Achievement Prizes. To win an Achievement Prize, Teams must also meet the minimum benchmark of a mean increase of 10 scale scores in the target demographic.	Number of scale scores above the minimum benchmark of a mean increase of 10 scale scores
Evidence of an average increase of 10 scale scores or more - the equivalent of one EFL difference between pre- and post- test means of field-test participants’ CASAS scale scores	Eligible Teams for the Cities Deployment Participation incentive will be determined by calculating the difference between the mean CASAS scale pre- and post-test scores of Teams’ adult participants. All Teams that surpass the minimum performance benchmark of an average increase of 10 scale scores will allow their solutions to be used free of charge in the Cities Deployment phase and will share the Cities Deployment Participation incentive equally.	PASS/FAIL

Winning a Prize does not preclude a Team from winning other Prizes. It is possible for only one Team, for example, to win the Grand Prize, both Achievement Prizes, and the entire Cities Deployment Participation incentive. To demonstrate how the Adult Literacy XPRIZE could be scored and the potential prize eligibility of competing Teams, a hypothetical example is presented in Table 3 below. This example assumes, for simplicity, that the ELS and ELL populations for each Team are of equal size. The Combined Mean Difference score will be calculated based on each Team’s entire test population and may not be the average of the ELS and ELL scores if those two groups are of unequal size.

TABLE 3. Hypothetical Example of Scoring

Mean CASAS Scale Scores								
Team	English Language Speaker (ELS) Demographic			English Language Learner (ELL) Demographic			Combined	Prize Eligibility
	Pre-test Score	Post-test Score	ELS Gain	Pre-test Score	Post-test Score	ELL Gain	Gain	
1	188	201	13	187	194	11	12.0	Cities Deployment Participation (CDP)
2	189	205	16	185	195	10	13.0	Grand Prize & CDP
3	195	203	8	201	210	9	8.5	Ineligible
4	191	201	10	190	205	15	12.5	Achievement Prize & CDP
5	192	210	18	189	195	6	12.0	Achievement Prize

In the hypothetical example above:

Team 1 is eligible to receive the Cities Deployment Participation incentive because it met the minimum threshold of 10 for the overall mean difference in each of the two demographics.

Team 2 is the winner of the Grand Prize because its mean difference across both demographics is highest and it met the minimum threshold of 10 for the overall average mean difference. It is also eligible for the Cities Deployment Participation incentive because it met the minimum threshold of 10 for the overall mean difference in each of the two demographics.

Team 3 did not meet the minimum threshold for the overall average mean difference and is eliminated from the competition.

Team 4 is the winner of the Achievement Prize for the English Language Learner demographic because it had the highest ELL mean difference for the English Language Learner demographic and met the minimum threshold of 10 scale scores. It is also eligible for the Cities Deployment Participation incentive.

Team 5 is the winner of the second Achievement Prize for the English Language Speakers demographic because it had the highest ELS mean difference for the English Language Speakers demographic and met the minimum threshold of 10 scale scores. It is not eligible for the Cities Deployment Participation incentive as it did not meet the minimum threshold of 10 in the English Language Learner demographic.

Phase 2 – Cities Deployment Phase

The details of the Cities Deployment Phase are described in the Adult Literacy XPRIZE Cities Deployment Phase Guidelines, a separate document.

Leaderboards

XPRIZE may implement interim status reports and/or other information postings describing the progress of the Teams involved in the Competition (“Leaderboards”) to help engage key audiences in the Competition and promote Teams by providing public and industry visibility. Rules and Regulations pertaining to Leaderboard programs will be periodically published, and Teams will be encouraged to participate.

Measurement and Validation Team

XPRIZE will convene a Measurement and Validation Team to oversee data management and analysis during the competition. The Measurement and Validation Team will be made up of technology and psychometric experts charged with managing the following:

- Pre-testing and post-testing data
- Teams’ parallel data transfers of data exchanges between Teams and field-test participants
- Cities’ solutions download data
- Collecting measurements during Stage 2 Judging, the Field Test, and Cities Deployment
- Measuring value differences after Field Testing and after Cities Deployment
- Validating data collected from competing Teams and cities

XPRIZE Advisory Boards and Judging Panels

To implement the Adult Learning XPRIZE and support the validity and integrity of the Prize process, XPRIZE will convene an Advisory Board, an Ethics Advisory Board, and a Judging Panel.

Selection of Advisors

XPRIZE will form panels of relevant Advisors to serve on Advisory Boards for the Competition. These Boards will remain in place throughout the Competition to advise XPRIZE regarding all aspects of the design and implementation of the Competition. Each Advisor will enter into an Agreement with XPRIZE that will: (i) outline Advisor’s duties and obligations; (ii) require Advisor to maintain confidentiality of XPRIZE’s and Teams’ Confidential Information, in accordance with the Agreement; and (iii) require Advisor to acknowledge that he or she shall make no claim to any Team’s Intellectual Property.

These panels will be independent of XPRIZE, the Title Donor, and all Teams and Team Members. No Advisor, nor any member of Advisor’s immediate family, shall participate, nor have any financial or other material interest, in any Team or Team Member. All Advisors shall promptly disclose to XPRIZE any such current, former, or expected future conflict of interest with XPRIZE, the Title Donor, and/or any Team or Team Member.

Advisory Board

The duties and responsibilities of the Advisory Board 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) providing input related to testing protocols and judging criteria, including the standard technical specifications and economic values; (iv) and providing input toward the development of these Competition Guidelines.

Independent Ethics Advisory Board

The duties and responsibilities of the Ethics Advisory Board 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) providing input related to recruitment strategies, testing protocols, and judging criteria; (iv) and providing input toward the development of these Competition Guidelines.

Judging Panel

The Judging Panel (as defined in the Agreement) will be comprised of highly qualified and impartial Judges. XPRIZE, in its sole and absolute discretion, will recommend Judging Panel candidates to the Advisory Board for its review and consideration. The Advisory Board will recommend the candidates it believes are best suited to serve on the Judging Panel. Judges will be subject to the same standards of impartiality and confidentiality applied to Advisors.

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 Agreement, these Guidelines, and the Rules and Regulations for the purposes of the Competition; and (ii) the awarding of points and selection of Teams and Entries that will proceed to each subsequent phase of the Competition.

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 decision after careful consideration of the testing protocols, procedures, guidelines, rules, regulations, criteria, results, and scores set forth in the Agreement, these Competition Guidelines (including the Rules and Regulations to be attached hereto), and all other applicable Exhibits to the 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 or Entries are tied at any stage during the competition, the Judging Panel shall have the sole and absolute discretion to settle the tie. If no Entry meets the criteria for an Award, then the Judging Panel will retain sole and absolute discretion to declare or not declare a winner of the Competition and/or otherwise allocate or choose not to allocate one or more of the Awards and/or any other Award associated with the Competition.

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, the Team, and each Team Member. XPRIZE and the Team 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. The Team 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.