**Invitation to Tender**

**Crystal Maze Game – Design and Architecture**

**October 2021**

**TENBIGTP007**

1. **About** **Rugged Interactive**

We are idea-driven, working with a strong focus on design and user experience. Our projects should engage audiences, we want to create wonderful digital things that people love to be part of and use. Using the latest technology, we create inclusive products that make keeping active fun from F1 to schools, trampolines to the EPL.

All of our products are expertly designed and produced using high quality materials. They are rigorously tested to ensure perfect performance every time.

This tender is for a supplier to provide the design and architecture for a new game and the purchase of these services is part of a grant funded application process and therefore procurement will be subject to grant approval of the project as a whole.

2. Background and Context

2.1 The game consists of a system of rooms/ areas that contain games, puzzles or challenges that the players have to complete to be awarded \*something\* such as points, time or crystals that they can exchange or use at the end of the game to either get a score or complete a final challenge. For instance, if the award for completing each challenge was time, then the players would have more time to complete the final challenge at the end of the game.

2.2 Each team or player has to register at the beginning of the game and are given a single Radio-Frequency Identification Device (RFID) to register the start of a challenge. The RFID device could be a bracelet, or a necklace, or a hanging tag.

2.3 Each room is a self-contained adventure zone. Initially, the system will use existing Rugged Interactive products but in the future could incorporate third party games:

1. Ball throwing game using AeroStrike / BattleBaskets
2. Target game using Ballistics
3. Speed and reaction using CardioWall
4. Penalty shootout using DA / PP
5. Race game using TriggerTrac
6. Climbing game using SkyClimb or TrailBlazer
7. Parkour / Agility game using NinjaPods

2.4 Every challenge area or room will be themed with lighting and effects to add to the atmosphere and excitement, plus every room will have a monitor showing leader board and in-game play.

2.5 Additionally, components in the rooms could be added together to enable the games to be enhanced. For instance, a series of Jenga type blocks that can have to be assembled in the right order to bridge a gap to enable the game to be played - or a rope course that has to be negotiated to allow the player to start the game. Each player or team can complete the course in any order but have to do all the challenges.

2.6 Jeopardy and Gamification. At the end of the game, having competed the challenges the player or team is given the chance to gamble - by going back and doing 1 challenge again, with the proviso that if they do better, they get to keep their extra points (perhaps with a multiplier) but if they do worse the difference between their first go and the second is deducted = less time in the final event.

2.7 Final Game. A game where pods have to chased through an arena (the greater the time ‘won’, the longer had in the arena) = Freedom Gaming. Players and teams use their RFID to start the game and it runs for the ‘won’ time whilst the players build a score. At the end, each player or team is awarded a final score and a place on the leader board.

3. Tender requirements

The successful tenderer will be expected to undertake the following activities:

Developments

3.1 Challenge areas / rooms are added to by using Radio Interactive sensors to create completely new interactive events. For instance, puzzle games, stepping stones, musical challenges, mental games

3.2 Marketing integration, to enable automatic contact with existing customers who have used the system and inform them about updates, latest scores, how they did compared with new players etc.

3.3 In game purchases - there is an opportunity to use the systems to work with the concessions area to build in sponsored or subsidised rewards to reflect winning gameplay, or merchandise sales.

3.4 System Architecture and design.

Using existing RI products (see section 2.3) reduces the development risk and increases the chance of a successful outcome but there are significant technical challenges remaining that the supplier will need to address:

1. Integration with the existing RI product software (see section 2.3). The tenderer will be required to integrate with the existing software which has been evolved over several years and as such uses bespoke OS and communication protocols.
2. RFID integration
3. Non-linear gameplay
4. Leader board integration and distribution
5. Room challenge integration
6. Marketing integration
7. Expandability
8. Lighting and effects control
9. Operator side use (setup / installer / after installation)
10. Updating - new games, sounds, challenges
11. Subscription

3.4.1 RFID

RFID reader components will be bought off the shelf and used with RFID bands / bracelets. Data entry and linking the RFID band with those details to allow tracking of individuals / teams through the course will have to be created.

Each player / Team registers their name, address etc at the start of the game and is given an RFID band. This is the key to ‘unlocking’ each challenge and tracking each player’s progress. At every challenge entrance/door it can only be started or accessed using the RFID band. If the challenge is being used then the player moves onto another, empty challenge.

3.4.2 Non-Linear Gameplay

At its heart the system is a workflow program, managing the movement of several items (people/players) at once around a complex system.

To make the gameplay truly non-linear each challenge can be attempted in any order, therefore each challenge needs to be available or NOT available.

Communication of the challenge state (ready to play / busy) is key to ensuring that players don’t have to queue and are moved through the challenge efficiently (and that they complete each challenge.

3.4.3 Leader board Integration and distribution

Each challenge will have a leader board and in-game progress screen in addition to an RFID reader. This will be used to both communicate how each team / player is doing relative to others but also communicate challenge state (available / not available). Screens will be available in both the challenge room / area and outside. If the challenge is currently in-use, the next player will not be able to enter the challenge area and the screen should be able to communicate to the player where the next available challenge is (and whether they may have finished).

3.4.4 Room Challenge Integration

In the first iteration, each of the challenges will be based on existing Rugged products to reduce risk. Each Rugged product will be used in ‘arcade’ more where they can be started and stopped and produce data in the following forms:

* Game played
* Score

Other data may be available but for leader board creation this is all that is necessary. Data is produced through RS485 protocols.

3.4.5 Marketing Integration

Data produced at the time of registration (option to do this online), linked to game performance means that users can be contacted to promote events, to encourage them to return and play again, and to challenged them. Subject to appropriate GDPR behaviour of course.

3.4.6 Expandability

Various other challenges can be envisaged, such as graphically based mental games, physical games not based on RI infrastructure and games using body tracking software (similar to Squid Games). In an ideal iteration games could be added more or less ad-infinitum, so that each player could not finish all challenges in a single session.

3.4.7 Lighting and effects control

Lighting and effects control through standard DMX or potentially MIDI to create atmosphere and excitement. Smoke machines and sound effects could be triggered this way.

3.4.8 Operator side use (setup / installer / after installation)

Rugged already have a management app that allows some equipment to be setup and controlled remotely. There will be a requirement to create a similar system so that the system performance can be monitored and setup (blocked rooms, failed components, slow movers etc) remotely. This can be a web app, or a location specific program to allow remote or local control of the system, data analysis and display.

Data to be displayed will be:

1. Power-up time
2. Popular games
3. Regularly used routes through the game
4. Speed through game
5. Hardware setup
6. Software versioning
7. Wireless / wired internet setup
8. Updater
9. Subscription control

3.4.9 Updating

Games are added alongside functionality by updating, either through a set cadence or manually. Or if a subscription model is created, to the level paid for.

3.4.10 Subscription

A regular payment which allows the user to update and maintain the system would be a desirable feature, allowing Rugged to support every system and add new graphics, sounds, challenges and operation. No subscription would mean a lower level of support and limited updates.

**4.** Budget

The total maximum budget available for this commission is £120,000 (exc VAT) but inclusive of all expenses.

**Tenders that exceed the total budget will not be considered.**

The budget will be reviewed as part of the tender evaluation detailed in Section 10 and will reflect the degree to which there is a saving on the maximum budget

5. Tender and commission timetable

The timescale of the programme is from the date of signing the contract from until 31 March 2022. The timetable for submission of the Tender, completion of the programme are set out below.

|  |  |
| --- | --- |
| **Milestone** | **Date** |
| Date ITT available on Contracts Finder | 21 October 2021 |
| Last date for raising queries | 29 October 2021 |
| Last date for clarifications to queries | 2 November 2021 |
| Deadline to return ITT | 11 November 2021 |
| Evaluation of ITT | 15 November 2021 |
| Award of Contract  | This is subject to successfully obtaining grant funding and will normally be no later than 90 days from contract evaluation |

6 Tender submission requirements

Please include the following information in your Tender submission.

6.1 Covering letter (two sides of A4 maximum) to include:

1. A single point of contact for all contact between the tenderer and Rugged Interactive during the tender selection process, and for further correspondence.
2. Confirmation that the tenderer has the resources available to meet the requirements outlined in this brief and its timelines. Please confirm the project can be completed by 31 March 2022 based on a 1 December 2021 start.
3. Confirmation that the tenderer holds current valid insurance policies as set out below and, if successful, supporting documentation will be provided as evidence (See Section 14)
4. Conflict of interest statement as per section 8

6.2 A written proposal as to how you would deliver the requirements of Section 3. Please ensure that your proposal specifically references the individual sub-paragraphs of Section 3 (3.1 – 3.4.10). it should also provide a section on project management detailing on how the project will be:

* Managed and delivered including timelines;
* Proposed meeting schedule;
* Project management methodologies to meet the objectives for the project
* Detail on how the team will work collaboratively with Rugged Interactive

* 1. Provide examples of two previous commissions, which you consider demonstrate your experience and ability (2 A4 pages maximum per example). Examples should demonstrate:
		+ Key similarities between these projects and the proposed commission;
		+ The client;
		+ Approximate cost;
		+ Outcomes;
	2. Costs to deliver the requirements in Section 3

**7 Sub-contracting**

Tenderers should note that a consortia can submit a tender but the sub-contracting of aspects of this commission after appointment will only be allowed by prior agreement with Rugged Interactive.

**8 Conflicts of Interest**

Tenderers must provide a clear statement with regard to potential conflicts of interests. Therefore, **please confirm within your tender submission** whether, to the best of your knowledge, there is any conflict of interest between your organisation and Rugged Interactive or its programme team that is likely to influence the outcome of this procurement either directly or indirectly through financial, economic or other personal interest which might be perceived to compromise the impartiality and independence of any party in the context of this procurement procedure.

Receipt of this statement will permit Rugged Interactive to ensure that, in the event of a conflict of interest being notified or noticed, appropriate steps are taken to ensure that the evaluation of any submission will be undertaken by an independent and impartial panel.

9 Tender clarifications

Any clarification queries arising from this Invitation to Tender which may have a bearing on the offer should be raised by email to:

**simon@rugged-interactive.com** in accordance with the Tender and Commission Timetable in section 5.

Responses to clarifications will be anonymised and uploaded by Rugged Interactive to Contracts Finder and will be viewable to all tenderers.

No representation by way of explanation or otherwise to persons or corporations tendering or desirous of tendering as to the meaning of the tender, contract or other tender documents or as to any other matter or thing to be done under the proposed contract shall bind Rugged Interactive unless such representation is in writing and duly signed by a Director/Partner of the tenderer. All such correspondence shall be returned with the Tender Documents and shall form part of the contract.

10 Tender evaluation methodology

Each Tender will be checked for completeness and compliance with all requirements of the ITT. Tenders will be evaluated to determine the most economically advantageous tender offer taking into consideration the award criteria.

**Tender returns will be assessed on the basis of the following tender award criteria**

|  |  |
| --- | --- |
| Ref 6.1 Covering Letter |  |
| Acceptable covering letter including confirmation of the requirements detailed at 6.1 | Pass/ Fail |
| Ref 6.2 Proposal | 50 |
| A written proposal as to how you would deliver the requirements of Section 3. Please ensure that your proposal specifically references the individual sub-paragraphs of Section 3 (3.1 – 3.4.10). it should also provide a section on project management detailing on how the project will be: • Managed and delivered including timelines; • Proposed meeting schedule; • Project management methodologies to meet the objectives for the project • Detail on how the team will work collaboratively with Rugged Interactive |  |
| Ref 6.3 | 20 |
| 6.3 Provide examples of two previous commissions, which you consider demonstrate your experience and ability (2 A4 pages maximum per example). Examples should demonstrate: • Key similarities between these projects and the proposed commission; • The client; • Approximate cost; • Outcomes; |  |
| Ref 6.4 Cost | 30 |
| A **fixed fee** for this work (exc VAT) including travel and other expensesThe lowest bid will be awarded the full 30 marks. Other bids will be awarded a mark that is proportionate to the level of their bid in comparison to the lowest bid i.e. Marks awarded = 30 x lowest bid / bid |  |

11**. Assessment of the Tender**

The reviewer will award the marks depending upon their assessment of the applicant’s tender submission using the following scoring to assess the response:

|  |
| --- |
| **Scoring Matrix for Award Criteria** |
| Score | Judgement | Interpretation |
| 100% | Excellent | Exceptional demonstration of the relevant ability, understanding, experience, skills, resource and/or quality measures required to provide the goods/works/services. Full evidence provided where required to support the response. |
| 80% | Good | Above average demonstration of the relevant ability, understanding, experience, skills, resource and/or quality measures required to provide the goods/works/services. Majority evidence provided to support the response. |
| 60% | Acceptable | Demonstration of the relevant ability, understanding, experience, skills, resource and/or quality measures required to provide the goods/works/services, with some evidence to support the response. |
| 40% | Minor Reservations | Some minor reservations of the relevant ability, understanding, experience, skills, resource and/or quality measures required to provide the goods/works/services, with little or no evidence to support the response. |
| 20% | Serious Reservations | Considerable reservations of the relevant ability, understanding, experience, skills, resource and/or quality measures required to provide the goods/works/services, with little or no evidence to support the response. |
| 0% | Unacceptable | Does not comply and/or insufficient information provided to demonstrate that there is the ability, understanding, experience, skills, resource and/or quality measures required to provide the goods/works/services, with little or no evidence to support the response. |

During the tender assessment period, Rugged Interactive reserves the right to seek clarification in writing from the tenderers, to assist it in its consideration of the tender. Tenders will be evaluated to determine the tender offer taking into consideration the award criteria weightings in the table above.

Rugged Interactive is not bound to accept the lowest price or any tender. Rugged Interactive will not reimburse any expense incurred in preparing tender responses. Any contract award will be conditional on the Contract being approved in accordance with Rugged Interactive’s internal procedures and Rugged Interactive being able to proceed.

13 Intellectual Property

The project is likely to involve the following intellectual property rights ("**IPR**")

13.1 **Background IPR**

Any and all IPRs owned by or licensed to the Tenderer which are or have been developed independently must be clearly identified as part of your submission.

13.2 **Third Party Software**

The Tenderer may use software (including any open source software) which is proprietary to any third party and that is either licensed to or is used by the Tenderer in the development of the project. However, the Tenderer must detail what third party software it intends to use and shall procure the necessary licences for Rugged Interactive’s use. In the case of open source software the Tenderer wishes to use in the project, the Tenderer must ensure that it does not include any open source software that contains a "copyleft" provision and shall include full details of the licence terms for such open source software. Costs of any licences are required to be listed separately and the cost of Year 1 licences shall be included in your price; Year 2 and Year 3 costs must be detailed separately and shall not form part of the costs of this submission.

13.3 **Project IPR**

This is to be assigned to Rugged Interactive in accordance with the Deed Of Assignment of IPR at Enclosures 1

**14 Insurances**

The contractor must effect and maintain with reputable insurers such policy or policies of insurance as may be necessary to cover the contractor’s obligations and liabilities under this contract, including but not limited to:

* Professional indemnity insurance with a limit of liability of not less than £1 million;
* Employers liability insurance with a limit if liability of not less than £1 million

All insurances shall cover for any one occurrence or series of occurrences arising out of any one event during the performance of this contract. The tenderer will be required to provide a copy of their insurance policies if successful in securing this contract.

15 Tender returns

Please submit the Tender document by email by 17:00 on 11 November 2021.

Send by email to:

simon@rugged-interactive.com with the following wording in

the subject box: “Tender TENBIGTP007 Strictly Confidential Crystal Maze Game – Design and Architecture”

Tenderers are advised to request an acknowledgement of receipt of their email.

16 Disclaimer

The issue of this documentation does not commit Rugged Interactive to award any contract pursuant to the tender process or enter into a contractual relationship with any provider of the service. Nothing in the documentation or in any other communications made between Rugged Interactive or its agents and any other party, or any part thereof, shall be taken as constituting a contract, agreement or representation between Rugged Interactive and any other party (save for a formal award of contract made in writing by or on behalf of Rugged Interactive).

Tenderers must obtain for themselves, at their own responsibility and expense, all information necessary for the preparation of their tender responses. Information supplied to the tenderers by Rugged Interactive or any information contained in Rugged Interactive’s publications is supplied only for general guidance in the preparation of the tender response. Tenderers must satisfy themselves by their own investigations as to the accuracy of any such information and no responsibility is accepted by Rugged Interactive for any loss or damage of whatever kind and howsoever caused arising from the use by tenderers of such information.

Rugged Interactive reserves the right to vary or change all or any part of the basis of the procedures for the procurement process at any time or not to proceed with the proposed procurement at all.

Cancellation of the procurement process (at any time) under any circumstances will not render Rugged Interactive liable for any costs or expenses incurred by tenderers during the procurement process.

Enclosures

1. Deed Of Assignment Of Intellectual Property Rights