International Center for Biosaline Agriculture - ICBA is an international, non-profit organization that aims to strengthen agricultural productivity in marginal and saline environments through identifying, testing and facilitating access to sustainable solutions for food, nutrition and income security.
Can you please share a brief overview around overall reason and vision behind developing this app? Also, a bit brief on your professional background will help us to connect our overall dots of understanding.

- Please check the background section of the RFP. You could also refer to these 2 links for more information: http://www.emiratessoilmuseum.org/about; https://www.biosaline.org/content/icba-glance

Do you have any documentation in place? Like wireframes, mockups, functional specification template?
- No

What is the overall concept and USP of your app?
- The app is to provide an experience that ignites enthusiasm and curiosity about soils within visitors. Currently, the displays at the museum are static (by nature) as there are no living organisms inside. The app is to give a more dynamic experience to visitors. We want to use animation and gamification to add some life to the soil displays by showing what is happening in nature within soil. For example, animations of the water and air moving within soil, or organisms living inside or root formations as well as additional information and pictures etc.

Who all will be various users of this app? What will be their user flow?
- The users are the museum visitors and students on field trips. They should start by first acknowledging their arrival to the museum to unlock the features of the tours and field trips. Afterwards they should select the purpose of their visit (tour or field trip and if field trip then which one exactly). Afterwards they would be guided through their experience according to their selection. They should be able to navigate between the AR and the guide with one click or swipe.

Do we have to develop backend or is it already available?
- Have to develop a backend

What part of app consist the AR functionality? Can you explain it with proper use case?
- All museum displays should be scannable to receive more information through AR both internal and external. For example, scanning a soil monolith and seeing its development through an animation or scanning a plant outside to receive more information on it.

What will be various other features that each user will avail?
- All features are in the RFP

How many languages this app will support?
- 1 but should be possible to add a second language in the future

Any similar reference mobile app that you can recommend?
- National Museum of Singapore augmented reality application, Skin & Bones Exhibition application (both education and AR) of the Smithsonian National Museum of Natural History.

For backend, do you prefer any specific technology to be considered? OR do you want us to recommend you the best one? Please advice?
- Please recommend best one. Should be user friendly.

What will be the anticipate size of daily users & concurrent users?
- 20 users daily. This number would grow in the future.

Are there any sub-admin roles? What all controls you would like to provide them?
- Not very clear, but to my understanding. In addition to the backend, if possible to have 1 access as a master access to be able to view users’ activity/progress and points collected etc. then would be great. This access will be only to view not edit. THIS IS NOT MANDATORY.

- What all controls you need as a super admin of app?
  - To edit content of application primarily.

- We assume you only need apps with iOS & Android mobile app support. No Tablets and iPad support? Right?
  - No, the application should be supported on any mobile device including tablets and iPads.

- Any target launch date in mind?
  - Mentioned in RFP.

- Any budget in mind?
  - No, but expected to be kept within reason.

- How would you like to create 3D objects of exhibits? It would be through third party tools or through app at run time?
  - Through the application.

- Would you like one Web Panel from where admin will be uploading and managing all info, images, videos etc. of each object?
  - Yes, please.

- App will be used in museum owned devices or any user could be able to install application.
  - Any user should be able to install it onto any mobile device. However, some parts such as field trips should only be accessible upon arrival to the museum.

- Feedback data and other user analytic data needs to be stored in the backend and can be viewed on admin panel?
  - Yes. Through the Web Panel as we do not want to bear costs of large servers for storage of information. Alternative ideas are welcome.

- Who will be creating field trips? What will be the flow process and duration of field trip?
  - We will provide the content of the trips. They last 3-3.5 hours. Students would first need to select the field trip they are participating in, then go through activity guides, videos, games and quizzes in an order that we will provide. They should be able to navigate between the field trip and AR with a single button or swipe.

- What type of activities and quizzes will be there in the app? Would it be like objective type questions? Would there be time limit/ timer for each activity and quizzes?
  - A timer would not be required. The activities, quizzes and games would differ. Some would be only instructions for an activity that would be done physically, some would be questions and answers, some would be games using AR (similar to, but in a much smaller scale than, Pokemon Go)

- Who will be uploading questions and activities data in the app? Would it be managed from admin panel?
  - Yes.

- Virtual Tour will be done by smart glass integration or from the app only?
  - From the app only

- How many type of users will be there to use application and manage application data? What will be there accessibility permissions?
• Use the application: All museum visitors (students/professionals/interested individuals). Manage the application data: employees at the museum/ICBA to update information and activities etc. as well as to monitor users data/progress and so on.

• Is there any specific reason for the technology stack to be cross-platform (Ionic, React Native, etc.)?
  o The application will be downloaded by users on their different mobile devices and we want the application to be easily accessed accordingly

• Is there any preference for backend technology?
  o No, you could recommend. Just something that uses Web Panels more so we do not require big servers

• It is mentioned in sub-section 2.1. - "Application able to scan all required exhibits / objects in the internal and external museum exhibitions.". This will require 3D object recognition for which 3D models of all exhibits / objects will be required in either CAD or OBJ format. Are the models readily available?
  o Models are not available. It has been advised not to scan the objects as the soils are difficult to recognize for devices but to use image scanning or QR scanning instead

• The audio reader for accessibility needs will read out the content on the screen and what is happening on the screen. Is this a correct assumption?
  o Yes.

• It is mentioned in sub-section 2.1. - "Users should have the ability to share the information they save with a watermark or automatically generated reference". Could you explain what is meant by "automatically generated reference"?
  o Emirates Soil Museum name/branding at the bottom or top of the item to be shared

• Is there a requirement of leader board for users to see their rank in different games?
  o No requirement for leader board.

• What would be the content of the quiz? Are the quiz results to be saved on the cloud for analytics and other operations or just to be shown to the users for their review? Are the quizzes configurable from backend?
  o Quiz results do not need to be saved on the cloud. They should only be shown to the user with the total points collected only to be saved on the users’ profile on the application. Quizzes and all other activities should be configurable from backend.

• What is meant by worksheets? Are the worksheets configurable from backend?
  o Worksheets are also some activities for the students on the application. They will be configured from the backend as well, yes.

• How many 3D models and animations are required?
  o 5

• References for museum mascots
• References for games
  o Farming games, climate change games/simulations, urban planning games/simulations
  o Dig it!, Soil4kids, NRCS
• Is reservation enabled on the application?
  o No, it should redirect to our website for now. This could be enabled later. If it is easy to enable and it would send the same email as the booking made through the website, then could be enabled from now. The same applies for booking events through the calendar of events.
• How many objects are there to scan at the museum?
  o 78
• What is to be done with the points?
  o They are to be saved on the profile of the user. The uses of them will be offline/out of the application
• There would be two types of end user:
  o General visitor
    • This type of user will be mainly focusing on the modules for the AR mode and collecting information from the artifact in the museum
    • This would be majorly guided tour
  o Field trip visitor: mostly students from schools/universities
    • These users will be mainly focused for the educational visits and completing activities
    • There would be educational flow for the students where they would be required to complete the quiz, activities, worksheet and acquire coins
• Interactive in-house navigation:
  o No location-based navigation required.
• We need to implement the calendar module from the back-end panel
  o Yes
• User can share the information over the social portal. The information would be watermarked
  o for the videos, while creating the video, the watermark would be added
• No online payment
• Loyalty Points: Here user can simply collect the coin/rewards on completing the activities/quizzes. This would be simply for stats purpose and its actual usage to redeem would be an offline mode in future care
• Worksheet would be similar to chatbot digital solution where the automated system would ask user various questions/quizzes and user need to answer and complete the task.
• User roles will be:
  o General visitor
  o Students/instructor field trip user
  o Admin of the system
• There would be a section in the application for the calendar that will feature events/exhibition information
• AR Games may feature:
  o Plant a tree
  o Capture various plants, animals, soil, insects, micro-organisms
  o Identify soils
  o Game relative to their food security in agriculture
• Other games will be physical as well not all the games would be featured in the app. There would simply be instructions for the other games
• Videos/animations need to be developed by the vendor. Client simply have images. References for the animations or objects would be provided.
  o Examples include water percolation within soil, air held inside soil, soil erosion, soil salinization, soil formation from rocks, soil amendment
• Can we submit the proposal in soft copy or it has to be in hard copy?
  o You could submit in soft copy through the procurement portal on our website.