

math&f

arab museum of
modern art

To the attention of:

Ms. Maral J. Bedoyan - Head of Education

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Executive Summary

We are team matAPP. MatAPP is working with the head of education from Mathaf. The education department tasked us with the mission of advancing the technologies in Mathaf through building a mobile application that would improve the visitor's experience and knowledge on art. The education department is mostly interested in how a mobile application can be a tool to encourage the visitors to engage more with art while on site at Mathaf and yet leave a lasting impression on the visitor upon leaving. matAPP is proposing a solution that is a bilingual mobile application that will allow users to scan a bar code to learn more about the art piece at sight through narrations as well as text. The mobile application will possibly also have a design your experience feature where visitors are encouraged to input their preference on art and the feature will consequently recommend a gallery that is most relevant to the visitor's interest. While developing the application, The matAPP team might possibly run into risks due to time limitations, the user's understanding of the technologies used and the environment factors that can affect the technologies used.

Mathaf Background

About the Organization

Mathaf which is an Arabic word for 'museum' brings about a different take to art itself with over 9000 works of art. Located within the boundaries of Qatar Foundation, Mathaf not only aims to portray the Modern arabic art it has acquired throughout the years but also looks at educating the public about art. Mathaf is currently under the supervision of H.E. Sheikha al-Mayassa bint Hamad bin Khalifa Al Thani and falls under two prime organizations; Qatar Foundation and Qatar Museums Authority.

“Mathaf aims to become a resource for its visitors both physical and virtual, local and global, to learn about modern Arab art.”

H.E Sheikha Al Mayassa is confident that Mathaf should not only be a local resource but also a global one. Her statement emphasis that the virtual presence of Mathaf will enable the Museum to be a resource for the globe.Mathaf is taking initiatives to expand its virtual presences through various projects.

Programs

- **Public Tours** - Tour guides for visitors to give context to different art work collections as well as to spark dialogues on various perceptions and interpretations of the art at sight.
- **Educational Tours** - Programs for school students such as coordinated school tour guides. During these guides students are encouraged to engage in dialogue about art by answering open ended questions.
- **Mathaf Voices** - An eight month internship for university students which is designed to teach them to add value to the museum. Interns are trained to lead exhibition tours and develop programs and events at the museum.

Staff

- **Head of Education - Maral J. Bedoyan**, holds the position of dealing with the education sector related to Mathaf. Several of the educational programs (mentioned in the 'Programs' section above) are handled by Ms. Bedoyan. The project team will be reaching Ms. Bedoyan through weekly meetings, phone calls and emails, as she is the focal point of contact.
- **Web Master Coordinator - Abdulaziz Zaghmout** is currently associated with Mathaf and is responsible for the digital content of the organization. The project team does have the contact details of Mr. Zaghmout, and hence will be contacting him for any technical support required, through scheduled meetings.
- **Tour Guides** - In order to navigate the public through the museum, tour guides in Mathaf can be booked through appointments.
- **IT Team** -Mathaf currently does not have an IT Team of its own. However, they do get support for the IT Department at QMA. The project team currently does not have contact details of the IT team as most of our questions go through either the Head of Education or Web Master Coordinator. Since, the IT Team is not directly affiliated with Mathaf, obtaining their contact details would be a challenge as well.
- **Wi - Fi** - Mathaf offers free wifi to their visitors. This will be beneficial when the visitors will be using the app as their tour guide.
- **Mail Chimp** - tool used by the organization for all its internal communication
- **Future Tech Plans** -The client has insisted that Mathaf does not use technology to enhance the features of the museum yet.

Technology Infrastructure, Management & Planning

Information Management

Planning

Based on the meeting we had with our client, we learned that our client felt that Mathaf are not up to date with the latest technologies and would love to incorporate technologies within the organization to help enhance the user's experience. Since Mathaf doesn't have a committee dedicated to technology planning, many of the technology planning is done by heads of other non-technology related departments. In this case, The education department is taking initiatives to deliver a mobile application to enhance the visitor's experience. Our team will hopefully bring value to Mathaf by further helping define the technology needs for developing this application.

EMu System - Mathaf retrieves the information about their art pieces from the EMu Database, which is an overall system for all the artworks present in Qatar. Mathaf does not have a database limited to their artworks only.

Encyclopedia - Mathaf includes in depth information about the various forms and pieces of art that they have acquired throughout the years. This information is available to the public from their online Encyclopedia, which is linked through the Mathaf Website .

Mathaf Project Opportunity

Project Opportunity

Tour Guides - Mathaf faces problem in arranging touring facilities for its guests as the staff and time constraint does not allow them to provide individual tour guides for each visitor. Although, they have thought of adapting the audio tour system from the Museum of Islamic Art, they have refrained from it due to cost inefficiency.

Memorable Experience - According to our client, one of the main objectives of the project should be to leave a lasting impression on the visitors. The visitors must be able to take something back with them as they leave Mathaf, thus enhancing their experience.

Expanding The Audience - Due to its location and lack of awareness, Mathaf experiences a low number of visitors. However, the aim of the museum is to target all age groups and also help create an interest for art in both the locals and expats.

Proposed Project Vision

The project envisions to educate the people about art during their visit to Mathaf. The client and the project team realize that it is necessary to familiarize the residents of the country with the region's rich art. The team therefore suggests creating a mobile application that will mainly serve as a portable tour guide for the visitors of Mathaf.

The aim of the project is not only to enhance the visitor's experience, but also to make them gain knowledge about art even after they leave the museum. Hence, the visitors will also have an opportunity to mark certain artwork and learn more about it in the future.

This will educate them inside the museum in an entertaining manner as well as keep them engaged after the visit. In order to make it a more successful project, the app must also act as an invitation to visit the museum. Hence, this can be achieved by providing notifications of the programs and events happening at Mathaf. However, the main focus of the project is to build a portable tour guide for the visitors at Mathaf. Therefore, the proposed project will serve as a tour guide as well as means to make the museum experience memorable for a wider range of audience.

User Stories

Scenarios that best describe our proposed solution

- User visits the museum and takes a tour. Makes his way to the labels of one of the art pieces and scans the code using the mathaf mobile app and gets the relative information.
- The user can choose to have this information as text or audio.
- User logs on to the mobile app and chooses the 'design your experience' category. He chooses the things he's interested in from the list of genres of art up for show at the museum. The app then acts as a tour guide and creates a tour for the user based on the selected preferences.
- The user chooses his/her preferred language. He/she receives the output and all information in the preferred language.
- The user is taking a tour of the museum through design your experience category. After each section of the museum, he uses the digital canvas in the mobile app to create his own art through his learnings. This is later projected on to the computers near the gift shop once the tour has finished.

Stakeholders Of This Project

To complete the project, the team will need to engage with the **Abdulaziz Zaghmout, Maral J. Bedoyan, Mathaf Visitors, Qatar Museums and Qatar Foundation**. Mr. Abdulaziz will be assisting the team with guidelines on the user interface as he manages the digital content of Mathaf. Furthermore, Ms. Maral will guide the project as she is fully aware about the artworks being displayed. Apart from them, the visitors of the museum are a crucial part of our group of stakeholders as we are aiming to enhance their experience. Enhancing the experience of Mathaf's visitors will also positively impact the overarching organizations, Qatar Museums and Qatar Foundation.

Benefits

Since the app will act as a portable tour guide for the visitors,

- the museum will not have to employ human tour guides, therefore saving time and money
- the visitors' will be get a better understanding of the meaning and story behind the art. This will create a lasting impression among the visitors.
- The app could potentially allow them to manage their content better.

Alternative Solutions

Few alternative solutions to help solve the problems are as follows:

- Increase the number of human tour guides to guide the visitors, however this would be cost and time inefficient.
- Incorporation of audio guides similar to that of MIA. However, this solution would be expensive if purchased for each visitor.
- Building an interactive program for tablets to be placed in different locations inside the museum. This solution may prevent all the visitors to get equal opportunity to gain information.

Expected Outcomes

Approach/Feature	Description	Priority Level	Measure of Outcome
Detailed Database	A database specifying which artwork is currently on display. The database must be implemented such that it can be easily updated when required.	Essential	
Mobile App	A mobile app that minimally allows the user to input a serial number (displayed on the label) or scan a barcode placed on the label, in order to retrieve a narration of the artwork (similar to storytelling). However, in this case it will be necessary to generate audio content. The app must also include a history of Mathaf itself. This will serve as a tour guide for the visitor.	Essential	Ask the visitors to rate their visit and the app as they complete their visit.
Bilingual App	The app could be bilingual in order to accommodate those who speak the Arabic language only.	Moderately Essential	Get similar feedback and ratings for both languages
Narration based on type of visitor	The story telling/narration could be altered depending on the age group of visitor.	Nice to have	Appreciation of art from all ages and type of visitors.
“Design your experience” feature	A feature that allows the visitor to design their experience. For instance, the visitor would choose a few options of their preferences and the app will process and recommend them about which galleries to visit.	Nice to have	Either through surveys, or a counter in the app that shows the admin on how many people used the feature
User account	A login system that will keep the visitors connected to Mathaf, allowing them to mark some artwork as “favorites”, such that the visitor could go back and further look into it.	Nice to have	No. of people creating an account logging in
Notifications to users	If a login system is created, Mathaf could send notifications about events/lectures to their visitors.	Nice to have	Comparison of the number of people attending the events/lectures

Feasibility

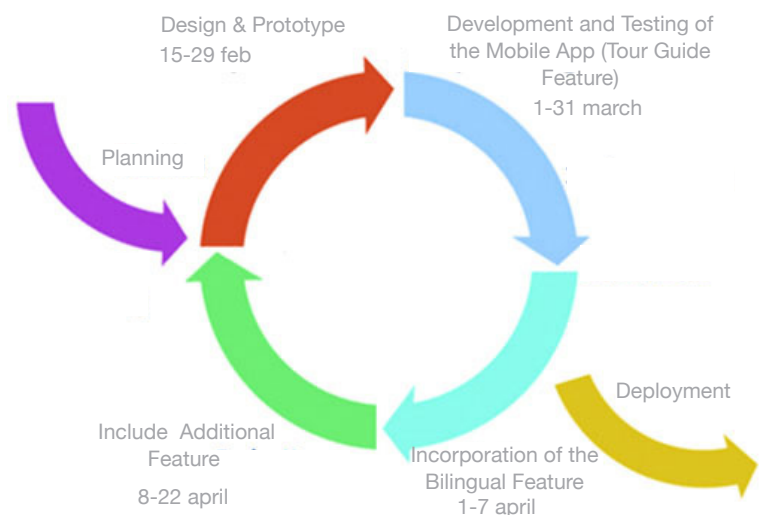
Sustainability

Mathaf currently does not have a full fledged IT support team. In order to keep the mobile app sustainable the project team will create a user guideline. The guideline will help the Mathaf team to update the database during the rotation of the artworks.

Limitations

- Mathaf does not have a database of their own for the artworks, hence the team will first need to create a database.
- The project team lacks previous experience in regards to building a mobile app from scratch. Hence the team members definitely anticipate there to be a learning curve in this project and are willing to work towards it.
- Since only one out of the four team members is well versed with the Arabic language, developing a bilingual app is definitely a challenge to the team.
- Delivering a mobile app for several different platforms combined is quite above the level of expertise present in the team. Hence, the team will focus on creating a native app for a single platform.
- Due to the limited time frame, the team will have to focus on a single feature and may not be able to implement all the proposed outcomes.

Timeline



Risk Analysis

Lack of Awareness

A museum visitor who is unfamiliar with bar codes would not be able to scan it, or take too much time scanning it. In either case, it can have a negative impact on the visitor's experience.

Likelihood of occurrence: Medium

Magnitude of potential loss: High

- Strategy

The user interface of the application could be designed in a way that it provides clear guidance to the user on how a bar code looks like, what it does and how to get the most of it. The physical form of the bar code is well lit up to make scanning easier and faster.

The alternate strategy is to move away from the bar codes. Each artifact can have a label of its own for example "11A". This label is stored in a database. If a user needs to know more about a particular piece of art, he can type the label in the app and retrieve the relative information.

Redesigning of labels

Given the space & size of the museum, it is not logically possible to showcase all this art at once. Hence, the museum keeps rotating its artifacts and exhibitions season by season. This runs us into the risk of redesigning labels every time a piece of art is rotated making the procedure costly. An outdated or non matching bar code would negatively impact the visitor experience.

Likelihood of occurrence: High

Magnitude of potential loss: High

- Strategy

Train one of the members of the IT department of the organization on how to update the barcodes. Have a fixed schedule for rotation of artifacts so that timely changes could be made to the data stored in the bar code.

Design Experience Disappointment

This feature would allow the visitor to design their experience. For instance, the visitor would choose a few options of their preferences and the app will process and recommend them about which galleries to visit. If the recommendations made by this feature are not satisfactory, a visitor could lose a huge chunk of his experience.

Likelihood of occurrence: Low

Magnitude of potential loss: High

- Strategy

Once a self designed tour of the museum is underway, the app could ask questions to the user on whether his/her preferences are being met. Depending on the answer, the app can either revamp the tour by making new recommendations, or continue on the initially recommended tour if the needs of the user are being met properly.

Bilinguality

To keep its connection with the heritage, culture and the unique history of Qatar Museums, it is important for the application to be in both Arabic and English languages.

Likelihood of occurrence: Low

Magnitude of potential loss: Medium

- Strategy

The user interface of the application can give an option to the users for retrieving information in their preferred language.

Conclusion

The vision of the project team is to deliver a working native app that not only enhances the visitors experience but also serves as a platform to keep them engaged. However, the project team definitely anticipates several challenges in the process such as developing a mobile app from scratch as well as enforcing the bilinguality of the app. Moreover, given the limited time frame of the project, delivering all of the features mentioned earlier is another challenge. With regards to the client expectations, Mathaf expects us to deliver a well developed and well tested mobile application that aims to create a difference in their community by improving their customer's experience.