## Open Issues

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| **Issue Number** | **Cross reference to affected requirements** | **Summary of the issue** | **Stakeholders involved** | **Action** | **Resolution** |
| 1 | Section 3c, solution constraints | This product shall be available on multiple platform, but developers are only testing on Android devices. | Developer, Core Team | Develop app on Android | Develop later version on more platforms |

## Off-the-Shelf Solutions

### Ready-Made Products

The “Zoo-Keeper” Application will be the first of its kind. No current mobile device application are used for the purpose of this product. The closet solution is the IBEIS Online Database System used by professionals which is currently being developed.

### Reusable Components

Current the IBEIS Database will be reuse for the application along with other IBEIS systems. This shall take weeks to implement into a mobile platform.

### Products That Can Be Copied

The Graphical User Interface (GUI) for the application will be remodel after the online version of the system. This shall take a week or two to implement onto the mobile platform.

## New Problems

### Effects on the Current Environment

* Information being displayed electronically will affect zoos that constantly update or use placards.

### Effects on the Installed Systems

There will be no effect on the system since there will be no system installed within the application.

### Potential User Problems

* Users who are not comfortable or familiar with the use of an electronic device will find some difficulty using the application.

### Limitations on the Anticipated Implementation Environment That May Inhibit the New Product

* IBEIS is not powerful enough to cope with the projected queries.
* The server is not powerful enough to cope with the growth of the projected queries.
* The application will not be able to run on all mobile platforms.

### Follow-Up Problems

* The server loses all of the queries, resulting in the users unable to look up information for a particular animal.
* IBEIS should be able to handle a large number of information and the server should be able to handle the growth of the queries.

## Tasks

### Project Planning

The "Zoo-Keeper" application is intended to be used by all types of users, regardless of whether the product will be used for personal or work purposes. This means that the application will have to undergo an extensive amount of testing prior to its release to the general public to ensure that the users of the product will not encounter any bugs or technical issues. Additionally, as the product is part of a large project that includes the contributions by many researchers, it also requires a substantial amount of time and money to be invested. As a result, using the Spiral Method (SDM) of the Software Development Life Cycle (SDLC) models would be the best approach for this project.

### Planning of the Development Phases

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| **Phase** | **Description** |
| Planning | Functional and non-functional requirements are gathered by means of trawling, interviews, and brainstorming. |
| Risk Analysis | Requirements are thoroughly analyzed to identify potential risks. Any risks found during the analysis encourages alternate solutions to be implemented. Once all of the risks are identified, a prototype is produced at the end of the phase. |
| Engineering | Develop the software using the prototype created during the risk analysis phase. Product also undergoes testing to ensure that it works as expected and meets the requirements from the planning phase. It is important that the product must be able to communicate with IBEIS and the server properly. |
| Evaluation | Customers use the product at a zoo for evaluation and provide feedback. |

## Migration to the New Product

This product is a new, greenfield, standalone product, therefore no migrations are necessary.

## Risks

Any application will have some risks that the developer must keep in mind during the design of the application. All the risks cannot be easily handled, but continuous checking for the application may result in maintaining risk free models. Some of the risks for this application are:

* User interface could be too good or may just satisfy the users.
* The design might not fit with the restraints of the implementation environment
* Large number of requests regarding animal information may burden the storage server’s ability to give the best results.
* We might be unable to sufficiently populate the databases to the point that they provide a wide range of experiences.
* Any fault or error while updating the database may result in displaying false information about the animals.

## Costs

The application does not need large sums of money, but it does need to be checked consistently to keep the application running at its best. The developers of the application must meet regularly as to make necessary changes to the database. However, the application requires time and man power to gather information for a substantial number of animal species. After obtaining the information, we then need to double check to make sure that the information is correct.

## User Documentation and Training

### User Documentation Requirements

The user documents must include user manuals if the user needs assistance with the application. This includes the basic description of the application and does not require any other documents.

### Training Requirements

Users do not need any prior training to use the application as it is designed so that any user can use the application without any help or difficulty.

## Waiting Room

All requirements must be fulfilled upon release.

## Ideas for Solutions

N/A