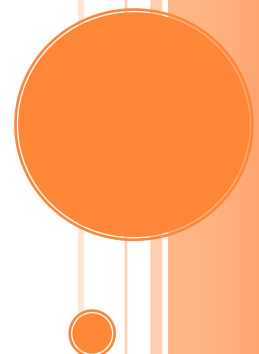


STAKEHOLDERS, GOALS AND TASK ANALYSIS

ACL Injury Prevention Team — Evaluation Assignment 1

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1. DESCRIPTION OF SYSTEM

This ACL injury prevention app will offer users the information about the likelihood that their present practices will prevent traumatic knee injuries. Users will be able to submit data about their activities. These data should be the responses of questions in the checklist, and their types could be numerical or enumerated. There will be feedback and corresponding suggestions for users to improve their training after they finished the survey. Besides, this app will gather the data submitted by users, and thus will enable the scientist to extract information from such large-scale data as the evidence for the practices.

2. STAKEHOLDERS

2.1 Stakeholder Onion Diagram

Figure 1 shows the diagram of stakeholder onion model, which is from the work of Ian Alexander and Suzanne Robertson, “*Understanding Project Sociology by Modeling Stakeholders*”.

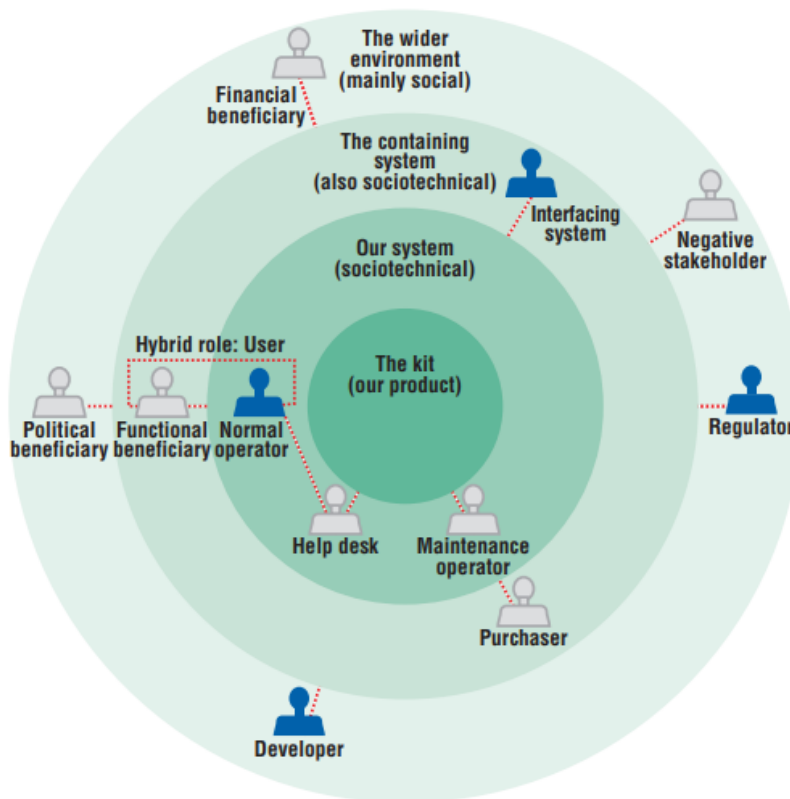


Figure 1. Stakeholder onion diagram

2.2 Description of Stakeholders

2.2.1 The App

The web app and its back end will allow users to input the data, then gather such data and present it to the scientists.

2.2.2 Athletes

The persons engage in the trainings, and can input the data about their practices to obtain the feedback.

2.2.3 Coaches

Trainers, who give athletes instructions in the training, also can input data to evaluate the practice of athletes.

2.2.4 Sports medicine personnel

The individuals work for sports medicine, might be interested in analysis of the data.

2.2.5 Scientists

Researchers will curate the data and then analyze it.

2.2.6 Developers

The team will design and create the app. Other developers might maintain or expand the app.

2.3 Stakeholder Goal Influence Table

Stakeholder	Goals	Contributing Influences	Constraining Influences
Athletes	Input data and receive feedback	Observations	Interact the interface fast and easy Erroneous data
Coaches	Input data and receive feedback	Observations	Interact the interface fast and easy Erroneous data
Sports medicine personnel	View and analyze data	Improve feedback	Remove erroneous data
Scientists	Analyze data and make conclusions	Improve feedback	Remove erroneous data
Developers	Make a practical app		Time to develop

2.4 Summary of the Stakeholder Goal Influence Table

In terms of contributing influences, athletes and coaches play the most important roles, because they offer the data. Athletes are expected to be the main data sources for this app due to the number of members, while coaches are expected to contribute more accurate data about the activities. Sports medicine personnel and scientists are providing their expertise to write the background of traumatic knee injuries and its prevention, and improve the feedback and suggestions to the responses. Once the database has received the inputting data, scientists will curate the data, and make the data clean for the analysis.

For the constraining influences, athletes and coaches might have the requirements that this app should be easy and fast to interact. Since they are not likely to be the experts of traumatic knee injuries, the terminologies in the checklist and feedback are needed to be clarified. Besides, it is possible for them to make the mistakes when they use the app or input the data. Sports medicine personnel and scientists need to clean the data before using them for the analysis, since some submissions will have errors or be spam inevitably. For the development team, the app might be constrained by the time limitation.

3. PERSONA

Charlotte Anderson

Age: 32

Occupation: P.E. teacher

Languages: English

Charlotte is a local physical education teacher in her early 30s. It has been seven years for her to teach P.E. at a high school. Because of her profession, she has the motivation to fill out the survey to evaluate the training that she provided in the classes. However, sometimes she is very busy, therefore, the reminder might be needed for her to submit the data with the update of the training. She has no problem to do the online survey.

Jacob Bardot

Age: 16

Occupation: student

Languages: English

Mr. Bardot is a high school student and a basketball player in his school. He receives the training every afternoon after classes. Since traumatic knee

injuries never happened on him, he might not have enough awareness to prevent such injuries during the training. Besides, his coach already made the plan for the training, Mr. Bardot usually just follows the instructions. He is a tech savvy, so it is absolutely fine for him to finish the survey online.

4. HIERARCHICAL TASK ANALYSIS (HTA)

4.1 Simplified Hierarchical Task Analysis

Normal user level pages:

- Introduction page

 - Read about general information of traumatic knee injuries

- Checklist page

 - Input data for the questions

 - Confirm submission

 - Feedback & Thank you --- Go to Feedback page

- Feedback page

 - Score for each question

 - Total credit

 - Suggestions

Scientist level pages:

- Data-viewing page

 - New added data

 - Some statistics of the data

 - Data export

4.2 Summary of the Simplified Hierarchical Task Analysis

This app does not have a complicated structure. It mainly has two sections: the normal user level and the scientist level. The normal user level pages include the sections of introduction, checklist and feedback, while the scientist level pages contains data-viewing page.

The introduction page should be a simple one. But it should have a clear layout and good explanations about traumatic knee injuries and its prevention. The page is used to improve the awareness of users and encourage them to evaluate their activities.

The checklist page should be the important page for this app. The purpose of it is to allow the users to fill out the survey and then submit the data. The way to input data should be straightforward and compatible for different

browsers. The confirmation should also be needed before the submission of the survey to avoid accidental input errors. Once the users confirm the submission, the page should direct them to the feedback page and thanks for the help.

The feedback page contains the results of the submitted survey. It should show the score of each question and then total credit of this evaluation to users. The corresponding suggestions for the activities to prevent traumatic knee injuries should be given at the last part of this page. Ideally this page should represent a way to return users to the introduction page in order to make them know traumatic knee injuries well.

The data-viewing page is for scientists or relative researchers exclusively. Therefore, the login is required to access this page. The new added data and some statistics should be shown in this page. More importantly, it should allow users to gather and export the survey data for the analysis of traumatic knee injuries.

5. APPENDIX

Notes from the meeting with Dr. Erich Petushek

The requirements of this app have been discussed with Dr. Erich Petushek. It will have a form or checklist for users. There will be 5 to 6 different questions in the survey. And Dr. Petushek will send us a sample list of questions through email. Based on the answers provided by users, the score will be given for each question. In order to gather the answers of questions, a database will be used. The data can be extracted from this database by scientist for the analysis. This app will be a website and will be optimized for mobile usage. Videos and links to some resources might be shared on the app.