6.1 Release One

For release one, the client and development team have agreed upon having the same functionality as the original website. This entails having three user levels with various permissions. The highest user level is admin which have these privileges:

- Backend access and edit
  - Admin has access to view the administration back end for users, projects, gigapans, and comments. They will also have the ability to add/modify/delete certain attributes of users, projects, gigapans, and comments from this backend.
- Can create new users
  - Admin can create new student from their profile page and create a new user from the backend.
- Can create projects
  - Admin can create projects from their profile page.
- Can comment
  - Admin are able to comment only on project they are a part of.
- Can edit user info
  - Admin can edit their own user info from their profile page and edit certain attributes of other users from the back end.
- Activity section
  - A section on their profile page that shows recent project activity. This activity would include information about new projects, GigaPans, and comments.

The team estimates that implementing the admin user level will take 40 hours and is at risk level three.

The second highest user level is teacher. They are able to:

- Create projects
  - From their profile page, teachers can create new projects.
- Create student accounts
  - Teachers can create new students from their profile or project page.
- Comment
  - Teachers can comment on a project they are a part of. If they would like to comment on a project they can email the teacher using the link on the project teacher's profile page.
- Edit user info
  - Teachers can edit their own user info as well as some of their students data.
- Activity section

- A section on their profile page that shows recent project activity. This activity would include information about new projects, GigaPans, and comments.

The teacher user level is estimated to take 25 hours to implement at risk level 2.5.

The lowest user level is student. They have very limited privileges that protect their privacy. These privileges are:
- Can comment
  - Student would be only able to comment on projects they are a part of.
- Can edit some user info
  - Students are only able to change their profile picture, description, and password. Students can only change their password while logged in. Forgotten password recovery for students would use the email of the teacher who added them to the site.
- Activity section
  - A section on their profile page that shows recent project activity. This activity would include information about new projects, GigaPans, and comments.

The team estimates that implementing the student user level will take 15 hours at risk level two.

Projects are a collection of related GigaPans that are used by a teacher(s) to discuss a certain issue with students. The user levels interact with projects in different ways. The stories for projects are:
- Edit project detail
  - Teachers and Admin users can edit details of the project like name, description, and curriculum area.
- Add GigaPans to project
  - GigaPans can be added to the project using ID number or searched for on gigapan.com. All GigaPans must be hosted on gigapan.com. Data about the GigaPan is copied to the sites database from gigapan.com. A preview image is shown on project page. When clicked it opens a page that displays the full GigaPan with the discussion underneath.
  - Comments on the GigaPan can be made with and without a snapshot of the GigaPan. A snapshot is a reference to a specific sample of the image. When clicked on, the displayed GigaPan zooms and pans to that sample. Each snapshot starts a new discussion thread where other users can comment. Each of these comments are color coded so the user level of the commenter is known.

- Add people to project
  - Teachers and admin can add other users to the project. Once added these users can then comment on the project's GigaPans.
- List of all projects
  - A list of projects on the site that is visible to all users. The name, description, location, teacher, and curriculum area would be displayed.

Implementing the stories for projects and GigaPans is estimated to take 50hrs at risk level four. Project implementation is the bulk of the project and requires the most outside resources.

Most of the pages on the site require a person to be signed in to see. However there are a few public pages that explain the site to outsiders. These pages include:
- about/homepage
  - A description of what the site is about. This would also be the homepage where users could login from.
- contact page
  - A contact form that non-users can use to email the Lab's outreach team about the site.
- help/resources page
  - A page for users and non-users to learn more about the site and how it works.

Since these pages are mostly static they require very little time and risk to implement. They are estimated to take ten hours at risk level one.

The total amount of time required for release one is 140 hours.

6.2 Release Two

Release two is mostly comprised of new functionality the client would like to see in the new site. Again, the stories for this release can be categorized by their location in the site. The addition functionality requested for the backend are:

- Batch upload users by admin and teacher users
  - Authorized users would be able to upload a csv or excel file that would create new student users based on the data. The file would need to be checked format to prevent database corruption.
- Database export to csv
  - Admin users would be able to export tables in the database to use for grant proposals and reports
- Database search
  - Admin users would be able to search the database by project and student attributes.
- Duplicate checking of users and projects
  - Upon creation of a new users or project, the site would prevent duplicate project names and user's usernames.

The development team estimates that implementation of these stories will take fifteen hours and is a risk level two.

The client would also like to have an additional user level called expert. Experts would be able to:

- Comment on project they are a part of
- Can edit their user info
- Activity section
  - A section on their profile page that shows recent project activity. This activity would include information about new projects, GigaPans, and comments.

Because their privileges are very similar to the student user level the team estimates that it will take fifteen hours to implement and is at risk level two.

The additional functionality wanted for the projects are:

- Attach a curriculum PDF
  - Teachers and Admin would be able to upload a PDF of the projects curriculum so that other teachers can use it while planning a similar GigaPan project.
- Archiving inactive projects
  - Inactivity would be based on how long since the last comment on a gigapan related to the project was. An admin user would sort the projects

based on this time and archive the project. Archiving the project would remove it from the list of projects but it would still show up on the users page and in the database. Teachers would be able to archive and unarchive their projects from the projects page.

The team expects this to take fifteen hours to implement with a risk level of two.

For the public side of the website the client would like to:
- showcase excellent projects
    - Excellent projects would be determined by the number and frequency of comments. GigaPans from these projects would be cycled on the homepage to showcase the site.
- a search tool for projects
    - The tool would search the projects by title, geographic location, and subject area.

The team estimates that this will take twenty-two hours at risk level three.

The total amount of time required for release two is 67 hours.