

# Project Report and Lessons Learned

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## Business Need/Opportunity

The Regina Mandolin Orchestra (RMO) is a democratic, member-run, nonprofit group registered in Saskatchewan. The RMO was officially organized in 1988 with 10 members and one mandolin student. It emerged as a unique performing ensemble that is today one of the largest folk orchestras in Canada. The members of the RMO have come from many musical backgrounds and experiences. Several musicians have performed together in other groups and have traveled extensively to perform in concerts, festivals and stage presentations.

The Orchestra was in need of a refurbished and improved web and mobile based site. This required a multifunctional product, capable of secure file sharing, scheduling, and storing archival and government records. The ultimate goal was to create an improved experience for the user that was free of confusing navigation and capable of self maintenance.

## Reflections on Project Planning

The northstar customer has minimal technological proficiency, and requires a simplistic interface for website interaction. This includes but is not limited to enforcing specific spacing, text presentation, and site coloring. The carryover customers will benefit from simple site navigation with a user experience that is generally appealing to any demographic. Since the customers have been developing with WordPress we have assumed that this will continue for the new website as well. The overall demographic of users tended to be seniors with a small user population but frequent website access. We were limited to less technologically proficient users, funding, minimal knowledge of WordPress capabilities, and largely dependent on plugins it provides.

From the empathy maps, we saw for the most part confusion and frustration to the lack of features and reliability of their old website. There were features that were thrown around such as a conductors box, music learning tools, sorting tools, individual log in credentials, editable music sheets, student section, music section music sheet segregation, contact members page, better site navigation, and more. However, the most alarming we found was the strong frustration and dislike of distribution of music sheets through email. So we organized these ideas with an affinity diagram to further help us simplify the complex problems and issues. With its help we were able to center our ideas into music sheet segregation, simple navigation, improved calendar, view by season, and user roles.

Next up in project planning was the group collaboration of creating our User Story Map (USM) and planning our first Minimum Viable Product (MVP). The customer notes we took from the first meeting with customers, empathy maps, and affinity diagramming, were key to creating our USM. These helped to highlight important desired user experiences for using the website. We developed the USM with these desired experiences in mind, and based our first MVP off the user experiences we wanted to work on. The first MVP consists of only the functionality that is

crucial for the use of the website, with a strong focus on the experiences that are important for the user use of the site. This includes functionality such as the music sheet distribution, a calendar with interactive events (RSVPing), individual user login/signup, a way to view all the users and a bit about each user, and more. We consider this to be an MVP as it offers upon all of the main experiences the user desires when using the site, not all experiences, but the main ones. With the functionality offered by our first MVP, the site would be fully usable by the RMO, and could act as an alternative to their current website, which leads us to believe that our produced site is a complete first MVP.

Lastly in the project planning was the low-fidelity (Lo-Fi) and high-fidelity (Hi-Fi) prototyping activities. The Lo-Fi prototyping was very useful to see the ideas that our group members had in mind for the design of the website. As a group we assessed all our individual Lo-Fi prototypes, and took ideas from each prototype to create a finalized Lo-Fi prototype created as a group. We found the group activity of creating a collaborative Lo-Fi prototype to be extremely useful, as it made the process of working on a Hi-Fi prototype very smooth, as everyone was on the same page for roughly what we wanted the Hi-Fi prototype to look like. When designing the Hi-Fi prototype we made sure to keep in mind some design principles and concepts to enhance our design, such as Gestalt principles, signifiers, and forcing functions. Some Gestalt principles such as symmetry, similarity, and proximity, were used for the design of the newsletter pages, as the newsletters were displayed in a symmetric fashion, with other similar newspapers shown in close proximity. Signifiers were used for our main navigation bar, and include icons such as a house icon for the home page, music notes for the music page, and a small calendar icon for the calendar page. Lastly, we used forcing functions for the design of the signup page and role editing menu. A "Confirm password" field was used for the signup form to ensure the user correctly inputted their password, and didn't make any typos. On the role editing menu, an additional menu pops up when an admin would like to submit role changes, and this menu double checks that the user would like to make their selected changes.

## Reflections on Project Results

This project had its ups and downs. Some of the things that we liked doing while working on this project was making the prototypes, as well as getting to develop the website itself. Some of the more frustrating aspects of this project was working with WordPress and finding plugins that would give us the functionality that we needed. In certain situations, we had to sacrifice trying to match the design of our Hi-Fi prototype in order to get the functionality we needed.

Many things went well during our time working on this project. Most of our pages were easy to develop, like the Home page and the Calendar page. It was also very easy to find a plugin that would allow us to create custom roles for the different instruments and sections that we needed. Despite this, some things did not go so well. One of these things was the functionality for the Music Sheets and Music Upload pages. One of the issues was that it is hard to split the file upload into different sections like we had planned. It was also difficult to separate viewing the files by role, partly due to the issues we had with uploading the files. We were constrained to the functionality of the free plugins that we found, so our final product did not match how we envisioned it in our Hi-Fi prototype.

When translating our prototypes into WordPress, our team was successful in some areas, and unsuccessful in others. As mentioned before, we struggled with the functionality on the music sheets page; uploading multiple files at once and displaying music based on role. We also struggled with making our pages look like our Hi-Fi prototypes. We worked within our constraints of WordPress and the plugins we used to make it look as similar as possible, but we valued getting the functionality to work above making our website match our Hi-Fi prototype.

The people-centered design ideas discussed in lectures helped our design explorations in becoming not only more visually appealing but also more accessible to a greater number of people. Keeping in mind some of the difficulties that our demographic would face when maneuvering a typical interface, our design explorations entailed creating as friendly of an

environment as possible. Big text and icons were utilized in the interface and these were modified using Gestalt psychology to organize what many would deem unflattering in design into something more visually appealing. This meant utilizing space to increase the clarity of our interface and as a consequence, this created a much cleaner design. We made sure to prioritize functionalities that we observed would be high in usage in the design, hence, the organization of our navigation bar - we placed what we inferred to be the most utilized pages at the top and the less frequented ones at the bottom. Pages we deemed would be high in usage were the Home, Music Sheets, and Calendar pages. Text, Options and other important items were also justified to the left, following the principles of the F-shape page scanning habits discussed in class.

What would be done the same for future projects is utilizing the same product design cycle we used in class. By first spending our time planning and placing a greater emphasis on analyzing the user's needs, the design process became much more polished. Spending a greater time on creating ideas, prototypes, and the concept of minimum viable product are all things that will bode well in future projects. The benefits that followed this process of development was a clearer vision of the customer needs and techniques for having focused considerations on designing from the customer's perspective (via empathy maps, user story maps etc).

Something that would be done differently on future projects would be having the same customers interviewed every meeting so that a more consistent profiling of user concerns could be determined. Making use of surveys would also be of benefit in acquiring an overview of the needs and preferences of a wider user base. Ultimately this would better encapsulate the needs of the wider audience while also receiving better feedback from the commissioning customers.

Some opportunities and design ideas for future work would include the utilization of the fast feedback cycle in the development process. I think it provides a better opportunity for the user to not only be designed for, but also have it become a part of the design process. It is also a great method of speeding up the design process by providing clearer feedback to designers.

## WordPress Themes and Plugins

**Plugin Name:** WP Responsive Tabs

**User Rating:** 4/5

**Number of Ratings:** 2

**Last Updated:** September, 2021

**Active Installations:** 80+

**Plugin Use:** WP Responsive Tabs is a plug in for tabs mainly used for WP Docs.

**Plugin Name:** WP Docs

**User Rating:** 5/5

**Number of Ratings:** 11

**Last Updated:** May 16, 2022

**Active Installations:** 1 000+

**Plugin Use:** WP Docs is a document management plugin that allows you to upload, display, and organize user files.

**Plugin Name:** Event Tickets and Registration

**User Rating:** 3.5/5

**Number of Ratings:** 112

**Last Updated:** June 6, 2022

**Active Installations:** 50 000+

**Plugin Use:** Event Tickets and Registration is an add-on plugin for The Events Calendar plugin. It gives the ability to add RSVP/Tickets capability to the Events Calendar.

**Plugin Name:** The Events Calendar

**User Rating:** 4.5/5

**Number of Ratings:** 1923

**Last Updated:** June 6, 2022

**Active Installations:** 800 000+

**Plugin Use:** The Events Calendar just like its name, is primarily used for adding and organizing events in a Calendar.

**Plugin Name:** Ultimate Member

**User Rating:** 4.5/5

**Number of Ratings:** 1343

**Last Updated:** June 1, 2022

**Active Installations:** 200 000+

**Plugin Use:** Ultimate Member's primary use is to handle the login and signup process, as well as the user profile, user roles, viewing other users on the site, and restricting site content based on the users role.

**Plugin Name:** User Role Editor

**User Rating:** 4.5/5

**Number of Ratings:** 61

**Last Updated:** May 19, 2022

**Active Installations:** 60 000+

**Plugin Use:** User Role Editor is used to edit and manage user roles, including allowing users to have multiple roles at once, with one primary role and any number of secondary roles.

**Plugin Name:** Menu Image

**User Rating:** 4.5/5

**Number of Ratings:** 116

**Last Updated:** March 8, 2022

**Active Installations:** 100 000+

**Plugin Use:** Menu Image is used to add icons to menu items on the site's main navigation bar/menu.

**Plugin Name:** Block Visibility

**User Rating:** 5/5

**Number of Ratings:** 30

**Last Updated:** May 12, 2022

**Active Installations:** 4000+

**Plugin Use:** Keep certain blocks invisible based on user role

**Plugin Name:** User Private Files

**User Rating:** 3.5/5

**Number of Ratings:** 6

**Last Updated:** June 5, 2022

**Active Installations:** 400+

**Plugin Use:** Allows front end user file sharing with drag and drop capabilities