

Campus Wide Wellness Initiative

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Group 2

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Project Initiation

Project Background

Whether it be in academic standings or the size of the campus and student body, UNCC has grown tremendously in the last decade. One of the largest additions to campus is UREC or the University Recreation Center. This multipurpose athletic facility houses a weight room, basketball courts, kickboxing room, indoor and outdoor pool, demo kitchen, and so much more. The addition of UREC is part of the university's larger strategy to promote and foster physical, mental, and emotional wellness amongst the UNCC community.

The cornerstone of their physical wellness is the UREC facility. Their efforts to encourage a healthier physical lifestyle are shown through their investment in state-of-the-art facilities. Providing access to modern gym equipment and an array of workout and movement classes encourages students and faculty to engage in healthy physical activities.

Engaging in regular physical activity stimulates the release of endorphins and neurotransmitters that help manage stress, alleviate anxiety, and combat depression. UREC is a center where students can recalibrate and empower themselves to work hard and stay resilient. Aside from the gym, UNCC has integrated several green spaces around campus that serve as retreats for students and faculty to escape and indulge in the serenity of nature.

Project Charter

Strategy

Whether it be working out in the weight room, taking a yoga class, or enjoying a walk through one of the botanical gardens, students and faculty play a role in cultivating a healthy environment on campus. The UNCC Gym Facility Management App Development project aims to create a comprehensive application to enhance gym facility management and promote healthy living among the University of North Carolina at Charlotte (UNCC) student community. This project has been officially recognized and approved by the relevant stakeholders, including the project sponsor and manager, with the goal of providing direction and guidance for its successful execution.

The primary objectives of the project are to develop a fully functional gym facility management application and to promote healthy living and well-being among UNCC students. By encouraging participation in gym activities and campus events, the app seeks to foster a culture of wellness and improve the overall campus experience. Additionally, the app will serve as a centralized platform for accessing information on gym occupancy, events, amenities, and stress relief suggestions.

The project consists of two main phases. The first phase involves collaborating with the UNCC Department of Computing and Informatics to develop the application. This phase includes the creation of features such as a gym occupancy checker, event promotions, campus directions, stress relief suggestions, and feedback mechanisms. The second phase focuses on promotion and deployment, which includes creating physical promotional materials, distributing them across campus, and launching the application during major campus events.

Tactical

The tactical plan that my group members and I brainstormed is an application for the gym that will have several different features. The first feature will be a gym and amenity occupancy checker which will assist users who want to go to the gym without having to navigate through too many people. There will also be in-app promotions and banners for various classes and events that will take place at UREC or Belk Gym. In addition to the events and classes at the gyms, this application will also promote the school, clubs, and intramural events all around campus plus directions to get to the events. Also for those who don't have the motivation to go to the gym, this application will also promote places on campus to relieve stress such as the botanical gardens or the greenway trail. We believe that the development of this application will increase the overall mental health and well-being of the entire UNCC community by promoting awareness of any and all events that happen on campus because it will hopefully motivate students to go to these events. Users will be able to provide feedback on features of the application and report problems on the application. There will also be physical promotions during major sporting events such as basketball games, soccer games, or football games where one of the screens will show a QR Code to scan to download our application.

Overall, we believe this is the best way to proceed with promoting awareness of events, and activities on campus. Due to the application's several features such as the occupancy checker, information about the greenway trails, botanical gardens, and the trails on campus to help promote health, wellness, and stress relief, this plan is more than capable of succeeding.

SWOT

In the endeavor to optimize gym facilities and promote healthy living on campus, the development of a Gym/Athletic Facility Efficiency/Management App project emerges as a significant initiative. A comprehensive SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis provides valuable insights into the potential impact and challenges associated with this project.

The Gym Facility Management App project boasts numerous strengths that align with the university's goals of promoting student well-being and academic success. By encouraging student participation in the gym and athletic activities, the app fosters a culture of healthy living, which is vital for both physical and mental well-being. Additionally, the project contributes to improved academic performance and learning outcomes by enhancing the overall quality of graduates entering the workforce. Furthermore, the app's multifaceted benefits extend to supporting the university, alumni, local businesses, and graduates, thereby fostering a symbiotic relationship within the campus community. Through networking opportunities and increased efficiency in event management and facility utilization, the app enhances the overall campus experience, promoting holistic student development.

Despite its strengths, the Gym Facility Management App project is not without its weaknesses. Potential challenges include the saturation of gym and event attendance if facilities are already operating at maximum efficiency. Moreover, there is a need to update job responsibilities for UREC/Belk faculty to include tasks such as checking gym/amenity floors and updating the occupancy checker. Dependence on faculty or designated groups for app content updates may also pose a challenge, as well as the disruption of predictability in facility occupancy patterns during the initial rollout phase. However, it's anticipated that these challenges will be addressed over time, leading to improved adoption rates and user satisfaction.

The Gym Facility Management App project presents several opportunities for engagement and growth. By engaging alumni through the app, the university can foster a sense of connection and participation, potentially offering incentives such as reduced gym membership costs or alumni-free days. Additionally, the app provides advertisement opportunities, generating revenue and offering benefits such as free parking with membership. Increased demand for athletic facilities and enhanced student participation through initiatives like day passes and exposure to various activities further contribute to the project's potential for success.

Despite its promising prospects, the Gym Facility Management App project faces certain threats that must be addressed. Competition from off-campus gyms and

athletic classes, as well as the risk of discontinuation of hosting classes or reduced support for gym facilities from UNCC, pose significant challenges. Additionally, perceived indifference towards student gym participation from the university administration could negatively impact motivation and engagement levels among students. However, proactive measures and strategic planning can mitigate these threats and ensure the project's success.

The Gym Facility Management App project holds immense potential for enhancing campus fitness and promoting a culture of healthy living among students. Through a comprehensive SWOT analysis, it becomes evident that while the project faces certain challenges and threats, its strengths and opportunities far outweigh the weaknesses. By leveraging its strengths, addressing weaknesses, capitalizing on opportunities, and mitigating threats, the project can realize its full potential and make a significant positive impact on the university community.

5: Payback Analysis

Investing this much time and effort into something must have long-term potential gains. Otherwise, there isn't much reason to do anything from a business standpoint. The University would have multiple different time periods of payback all with different outcomes from each. From 2 years to 10 years, this project will bring in so much that will change not just the school but the entire city of Charlotte.

Within 2 years of this project's release, after the initial introduction of the project, we estimate that a solid 20-30% of students will be affected by the project, whether it's via app downloads or campus advertising. Within 2 years nearly a third of the student population would have their physical and mental health improved on campus.

It will become a domino effect, healthier students moving around campus will bring in more foot traffic for the campus. As a result, the use of amenities and sales at multiple store locations and vending machines will increase significantly. Most likely the Student Union might need a mini store rather than 1-2 vending machines with all the new foot traffic coming through. Another domino is that the type of students that come to our school will change.

Over time, with more and more of the student population becoming healthier this will attract more student-athletes for UNC Charlotte, and more student-athletes would be an incredible payback/investment for the school sports teams. Some outcomes of this include better-performing Charlotte sports teams, company sponsorships for student-athletes, and more national screen time for the school at sporting events. Of course, growth and profits are finite, eventually the limit for the efficiency and impact this project will have will be hit. But the far future payback, 10+ years, will be incredible. The student body will be happier and healthier for years to come, and a need for more gym amenities will go through the roof so the university will have to build more gyms and outdoor sports facilities around the campus.

Scope

Our first phase is building an application—which we plan to collaborate with the UNCC Department of Computing and Informatics to develop an Athletic Efficiency application. We will utilize on-campus resources for the development of the application. Our second phase will be promoting wellness events and the app around campus. We will allocate resources to make physical flyers and posters that will be distributed to students around campus and the posters will be installed in high-traffic areas where the students will walk through. We plan to install them in the parking lots, around the student union, and in several department buildings.

Assumptions

1. We will have full support from UNCC.

Seeing that we need permission from the university to build the app as well as get funding to develop the application, we assume we will have full support from the university to make our project happen.

2. There will be enough supplies for posters and flyers.

Part of our project will be putting up posters and handing flyers out around campus advertising the application and key athletic events that occur around campus. We assume there will be enough materials available to consistently advertise using posters and flyers.

3. Once the app is developed and launched, UNCC will take over maintenance, for the foreseeable future.

Since we are utilizing UNCC's resources and developing this project through the university, we are still bound by their licensing in which they take ownership of the application and marketing.

4. UNCC is not utilizing its athletic facilities and events to maximum efficiency.

We are assuming that the facilities and amenities available to UNCC students are not being utilized and operated at maximum efficiency. The marketing and application will promote higher and more even attendance to facilities.

5. Students will download and use the application.

With the main focus of improving campus athletic efficiency through our application, we assure those who participate in activities, go to the gym, etc. will download and use the app.

3 Constraints:

1. Total Budget is \$65,000.

We estimate a base cost of around \$60k with around 4 months of development and an additional \$10k for every month following. For the second phase, we are looking at posters, flyers, and possible incentives for students who participate in events or interact with the app which would ring up about \$200 every 3 months. All in, we are expecting around \$60k-\$72k to complete and maintain this project.

2. Work will take 18 months to complete.
3. The work described in the Scope is what I am limited to. Additional work will not be provided unless additional funding or time is supplied.

Requirements list:

Business(Why our product over others):

1. Security: Our application needs to be secure so that it is trusted by all.
2. Compliance/Regulations: Needs to be within App Store and Google Play regulations
3. Exposure: Better advertisement for all athletic wellness events and activities.
4. Legal: Doesn't void copyright laws and has to adhere to privacy standards
5. Branding: Has a similar design to other university-related apps/websites
6. Partners: Incorporate the needs and wants of our business partners and other stakeholders
7. Target Demographic: Identify and work for/towards said demographics of people; Students, international, operating system(android vs Apple)
8. Benefits/Incentives: Gain rewards for booking events or activities through the app
9. "All in one": View all campus events and activities in one place
10. Facilitate Facility Efficiency: Optimizing resource utilization and reducing congestion in popular spots.

Technical(Standard for our product):

1. Usability: The app needs to be functional.
2. Capacity: Needs to hold a certain amount of students
3. Scalability: Need to be able to scale up to more students
4. Longevity: Needs to last long after the project has been launched and implemented.
5. Speed & Latency: The app should be instant feedback to the user,
6. Performance: The app needs to have reasonable loading times.
7. Map integration: Connect with maps software to direct to events and facilities.

8. Scheduling: Integrate 3rd party scheduling and calendar apps like Google apps.
9. Accessibility: Ensure the app meets accessibility standards to accommodate users with disabilities.
10. Data/Database management: Utilize a robust database management system to store event data, promotions, facility news/closures, etc.

Non-technical(Driven by end-user):

1. Interface: A user-friendly interface that is appealing to customers
2. Advertisement: How the posters are designed
3. App display: Dark or light mode
4. Color Customization: You can customize the color scheme of the app.
5. Multilingual Support: Provide the option for different languages for the app.
6. Performance Metrics: Define performance indicators and track them
7. Canvas Integration: Adds Canvas events to the app calendar
8. Norm the Niner: Get norm to advertise the app
9. No-Adds: If the user pays for the app, then no advertisements.
10. Not power hungry: Does not use device resources as much.

Scheduling

Time Duration Estimating

For this project, we will be using 8 am - 5 pm as a normal workday for time duration. A normal week will consist of Monday - Friday, but we will have Saturdays reserved for any emergency situation such as disaster recovery, or an app crashing error as examples. Project work will begin on the first Monday of the year 2025, which is 1/06/25.

In the App Development phase, the Backend development spans over 6 weeks to allow sufficient time for thorough research on databases, testing of capacities, and integration of data. These tasks are crucial for laying a robust foundation for the application. Similarly, the Frontend development is allocated 3 weeks, with a significant portion dedicated to planning the Figma demo and creating design teams. This timeline acknowledges the importance of user interface and experience in the success of the application.

Conceptualizing designs takes 3 weeks to ensure ample time for brainstorming, feedback iterations, and finalizing the visual representation of the campaign. Gathering resources needed is allocated 2 days, as it involves logistical tasks such as procuring materials and organizing team members. Advertise Around Campus spans over 8 days to accommodate the physical deployment of promotional materials across different locations on campus, ensuring maximum visibility.

Additionally, certain tasks such as User Feedback and Transitioning Maintenance are allocated longer durations to account for ongoing processes and continuous improvement. User feedback is given 9 weeks to establish a robust feedback mechanism, gather data, analyze trends, and implement necessary changes iteratively. Transitioning Maintenance spans over 6 weeks to facilitate a smooth handover of ownership, knowledge transfer, and ensuring that the app's maintenance plan is well-understood and implemented by relevant stakeholders.

Sequencing

The most important phase in our project plan is gaining the support from UNCC. Before we even start building our application and mapping out the advertisements, we need the legal and financial backing of the university. For this part of the project, we would have a full project plan document with any restrictions or requirements that the university would place on the development of our application and the advertisements around campus.

The next portion of our project is allocating the resources from the university for our application or the poster and flyers from stores. This is essential to our project development but requires the support of the university beforehand so we have the funds to acquire such resources. A milestone we'd have for this phase would be a meeting with

our team to ensure we have enough manpower and physical resources such as posters and flyers to complete both the application and advertisements of the wellness initiative.

Our third phase of our project plan is the development of the application. Now that we have attained a development team and support from the university, we can start the process of building our application. Once we have the milestone of our application built, we plan to meet and discuss the development process and confirm everything that the university requires is met.

Next, we have the transitioning maintenance phase. We need to ensure that the maintenance of the application is transferred to the university and the new development team is aware of how to maintain the app. This is further down the list since we need approval from the university as well as the resources to complete the application first. The deliverable for this part would be a detailed maintenance plan and list of things for the team to look out for.

For our final main phase of the project, we have marketing. Marketing consists of all the advertisements for the application as well as the different wellness events happening all over campus. This is last since we need the development of the application complete, all the resources to make the advertisements, as well as the legal support from UNCC. The milestone for this phase would be curated designs for our flyers and posters as well as a document detailing a plan on when and where to advertise.

Calendaring

For the calendaring we worked around holidays and scheduled tasks based on whether they can be done linear or concurrently. The beginning of the project starts on January 6th, 2025 so we can give employees time to get back into their mental work mode. We would take September 11th off of work typically as a remembrance day. We would have similar plans to federal holidays where we would take the day off. As for the end of the year we would conclude on November 11th to give employees time to handle their financial situations for the end of the year.

Risk Management Plan

For our first risk in our risk management plan, we thought it was important to set up two test groups to ensure that any unlogged error would be caught during this process, so we decided to give each group 2 weeks to fully test the application, but they would be testing the application at the same time to speed up the process. We also concluded that resolving the errors would take more than 2 weeks, so we decided to allocate 4 weeks to fixing errors. Due to the bulk of work in this risk, we allocated a total of 8 weeks towards this.

In response to the risk of exceeding app development costs, a meticulous strategy was devised. An initial two-day assessment was conducted to ascertain the extent of the budget overrun. Subsequently, three days were dedicated to comparing alternative

backend database storage options and associated costs. An additional day was allocated to evaluate cost implications vis-à-vis budget constraints. Following the selection of a new database solution, a two-week period was designated for finalization and implementation. To mitigate the repercussions of over-budgeting, a total of three weeks were allocated for this endeavor.

Mitigating the risk associated with unfavorable contract guidelines necessitated a systematic approach. A nine-day timeframe was allocated for convening meetings with the Student Government Association (SGA) and pertinent departments to review existing guidelines and propose revisions. Subsequently, a day was reserved for finalizing agreements and addressing legal matters, culminating in the signing of the new contract. The establishment of favorable contract terms spans about 2 weeks.

Addressing the risk of permit acquisition challenges requires a multifaceted strategy. A week was dedicated to re-investigating requirements by the University of North Carolina at Charlotte (UNCC) and identifying any deficiencies in the information necessary for obtaining permits. This was followed by discussions on legal hurdles and the development of compliance strategies over three days. To expedite resolution, a total of two weeks were allocated to navigate the permit acquisition process.

To mitigate the risk of the application falling short of performance expectations, a proactive approach was adopted. Nine days were designated for scheduling a meeting with the Computing and Informatics Director to address performance concerns and propose solutions. A day was allocated to review contract guidelines pertaining to performance expectations. Subsequent actions included proposing performance enhancement methods over a day, followed by the transfer of responsibility to the Department of Computing and Informatics within a day. This strategy spanned two weeks to ensure effective resolution of performance issues.

Quality Plan

5 Critical Quality measures

I. Posters and Advertisements user attraction

Qualitatively: People on campus stop and look at the posters. They also should pull out their phones and use the QR codes. Our posters should potentially disrupt the flow of traffic on campus. It should have students stop on their way to and from class.

Quantitatively: A high number of QR code scans and links clicked to the App Store.

Tasks:

1. Observe each poster for misprints or any errors before advertising in the real world.
2. Stand by a poster and observe students to see if they scan it.
3. Ask fellow students for their feedback, and ways to make the posters more attractive and noticeable to other students.
4. Hire a potential popular graphics designer to handle poster designs.
5. Only use quality materials for the posters, will not stick to cheap affordable options if there is a clear difference in quality.

II. User App interaction

Users use the Athletic Efficiency app seamlessly without issues. Information loads correctly and updates in real-time providing users with the most recent data. Statistics show continuous usage amongst users. 95% of users report no systematic issues with a high rate of downloads. App store rating of at least 4.5 stars.

Tasks:

1. Advancing the user feedback in the app to implement “hotfixes” to the app.
2. Encouraging users to leave a good rating on the app.
3. Develop a focus group after launch to understand quality.
4. Document feedback from focus group meetings.
5. Hire 3rd party developers to review the app.

III. Quality of Features

Qualitatively: Most features that were requested by UNCC are implemented and functional.

Quantitatively: Four out of five features are implemented and functional by the end of the project.

Tasks:

1. Feature Prioritization: Review and prioritize the remaining features based on their importance to UNCC's objectives and the project's overall success.

2. Agile Development: Adopt agile development methodologies to iteratively implement and refine features, allowing for flexible adjustments based on stakeholder feedback.
3. Stakeholder Engagement: Maintain open communication channels with UNCC stakeholders to gather feedback on implemented features and make necessary adjustments or refinements.
4. Documentation: Ensure comprehensive documentation of implemented features, including user manuals and technical specifications, to facilitate user adoption and support future maintenance efforts.
5. Cross-Platform Compatibility: Verify that implemented features work seamlessly across different devices and operating systems.

IV. Quality of Transitioning Maintenance

Qualitatively: UNCC will have complete control and understanding of how to maintain the application and advertisement of facilities and apps.

Quantitatively: Percentages of students enrolled on campus using the app remain consistent with the release date.

Tasks:

1. Introduce the employees who will take over to our system a few weeks before transition day.
2. Show PM the entire process for advertisement.
3. Introduce programmers to the code for the entire app and troubleshooting steps.
4. Let the new team work on the app for 3 days while monitoring them every step of the way.
5. Transfer all data and applications to new ownership

V. Quality of Resources

Qualitatively: Physical materials are up to par, they don't break easily or run out of things quickly(Pens, glue, etc...) The humans we have hired are also friendly and easy to talk to. They should have well-written resumes.

Quantitatively: Posters can be reused 2-3 times, Designers hired have previous experience at least a minimum of 5 clients before us.

Tasks:

1. Vet the potential designers, and go over their previous work.
2. Double-check the items bought, and make sure they are the correct items and are durable.
3. research the resources types being purchased to determine how to check quality
4. purchase extra resources
5. After all resources are checked, build the posters

Change Control

Stakeholders:

- Students
 - These will be the main users of the application.
 - They will have more awareness of events happening on campus, and can take advantage of opportunities to attend events to become more involved in campus activities.
- University
 - They will obtain full ownership of the application after it is fully developed.
 - They will be responsible for application maintenance once the app is under their control as well.
 - Will allow us to place posters on the walls of parking decks.
- Niner Club Organizations
 - Will have the capability to post their events onto the application for student awareness
 - Will advertise the application at events they host.
- Athletic Teams
 - Will advertise the application on social media using popular players as a way to connect with students
- Athletic Directors of UNCC
 - Will have the capability to include UREC and other school gym locations within the application.
- Sponsors
 - There will be advertisements and specific sections in our application as well as our advertisements to include our sponsors logos and/or messages.

- Who is allowed to submit a change?
 - University Administrators and Chancellor
- Who will approve it?
 - The heads of the project team and more specifically the Lead PM.
- Floor limits or ceilings on costs:
 - If it goes out of the scope and the amount of resources we have we will need more resources and time to complete the project
- Points in the project where changes will no longer be allowed:
 - Whenever we transfer the maintenance of the app to UNCC. We won't have any part in all other changes past this point will be delegated to the university's IT department.
- How the customer/stakeholder will communicate changes to you?
 - We will communicate with stakeholders through emails or phone calls and have a meeting to initialize changes and obtain documentation of such changes

Closing Phase

Communications:

Our communication skills and performance were superb. In person our communication was top tier, great conversation., good ideas, and good note taking. Our in-class meetings were probably the best they could have been.

We decided to use a groupchat for out of class meetings and communication, mostly to discuss deadlines and work balance.

We as a group believe that we met or exceeded all expectations for most of the assignments and had great communication overall.

Document Management:

We all have shared access to documents and they are all organized on our Google Drive. We divided up the work for our assignments. We agreed on who was working on what in class and then worked on it until the due date. If we had questions on what needed to be done we would refer back to what we said in class and ask questions to each other.

Leadership:

We all worked together to help each other and lead the project in our own ways. There were a few of us that led conversations in class and made sure we completed what we needed to do in class. Then there were a few of us that made sure assignments out of class were divided up properly and done on time.