UVIC CARSA QUICK PASS

CARSA QuickPass
Project Charter

University of Victoria

Table of Contents

Section 1. Project Overview

1.1 Executive Summary

CARSA QuickPass is designed to accelerate and facilitate the vaccine verification process of patrons accessing the University of Victoria's (UVIC) Center for Athletics, Recreation and Special Abilities (CARSA). This goal is achieved by integrating each patron's vaccination status into a database under CARSA's ownership. The current system consists of two CARSA employees stationed at the facility entrance to manually validate incoming patron's vaccination status. Given the substantial amount of traffic incoming to CARSA every day, substantial improvements can be made in the allocation of human resources through the implementation of CARSA QuickPass to replace this redundant and repetitive verification process.

CARSA QuickPass is a desktop application through which CARSA employees can verify the vaccination status of patrons. The information of vaccination status is stored in a provided database. Also included, is an online vaccination verification system implemented within the Vikes Active Living website. This project serves to benefit both CARSA employees and all patrons. The key objectives of CARSA QuickPass are to minimize entry wait times, and increase employee productivity in other areas or needs of CARSA.

1.2 Context

CARSA is a sports facility operated by the University of Victoria. Opened in 2015, it partially replaced the Ian Stewart Complex and the McKinnon Gym. Some of the amenities offered include, but are not limited to, a gym, a multipurpose fieldhouse, a climbing center, a dance space, fitness classes, and courts for various sports [1]. While CARSA primarily serves UVIC students and staff, it is also open to the general public for elevated admission prices.

The COVID-19 pandemic has severely impacted the operation of businesses and institutions across the globe, the University of Victoria is no exception. Although both the university campus and CARSA are open as of September 2021, there are restrictions in place. UVIC students and staff on campus are required to confirm their vaccination status, and each patron who wishes to enter CARSA must have both a form of government-issued photo identification and a proof of vaccination.

The manual verification of patrons each time they wish to enter CARSA is time-consuming and labor-intensive for CARSA employees. Additionally, the resulting lineups, at times consisting of over a dozen patrons, may encourage the transmission of COVID-19. CARSA QuickPass is proposed to help the University of Victoria and CARSA to mitigate the lengthy queues.

1.3 Project Need

The current solution consists of two CARSA employees stationed in front of the CARSA reception. Patrons who wish to enter CARSA must have their identity and vaccination status verified before further access to the facility is granted. The identity and vaccination verification process takes an employee on average one minute per person. This creates a significant bottleneck compared to the admission process prior to COVID-19. Originally, the only required step for admission into the facility was the verification of the individual’s CARSA membership using automated card scanners placed on top of the turnstiles. There are multiple drawbacks to the current CARSA COVID-19 vaccination verification process. Firstly, the long delays before entry can negatively impact patrons' satisfaction meaning they are less likely to return to CARSA. Currently patrons may experience wait times upwards of five to six minutes during peak-hours (5:00PM PST to 8:00PM PST) with an average of one to two minutes during off-peak hours. Secondly, allocating CARSA employees to verifying the vaccination status of patrons consumes human resources that could be spent on fulfilling other operational duties. Finally, the queues could potentially serve as an avenue for transmission of COVID-19. Not only could patrons become exposed to COVID-19 while waiting in queue, but CARSA employees operating the verification stations are at the

most risk; they come into close contact with “an average estimate of 1,000 incoming patrons daily”, according to project client Ben Phelps.

CARSA QuickPass is a solution designed to address all three of the aforementioned issues. By creating a database for storing patron vaccination status, and by extending CARSA’s existing access control mechanisms to allow access only to vaccinated patrons, CARSA can reduce the queue length to pre-COVID levels. Automated card scanners will be able to verify cardholders’ membership status while simultaneously verifying their vaccination status. Each patron’s vaccination status will only have to be manually verified once, in contrast to the current system where each patron must be manually verified each time to access CARSA. After an initial manual verification, patrons will no longer be subject to queues on subsequent visits. Additionally, by reducing the number of manual verifications needed CARSA employees will be exposed to less risk of COVID-19 and simultaneously freed to handle other operational duties. Initial vaccination verification can be handled by CARSA employees at the reception desk. CARSA QuickPass will increase patron satisfaction, protect both employees and patrons from COVID-19, and free up CARSA employees to attend to more pressing needs.

1.4 Scope

CARSA QuickPass is a desktop application being developed to decrease overwhelming foot traffic at the CARSA reception desk. This project will include research and analysis of CARSA and its current system to determine a more efficient system for checking in to CARSA, as well as its subsequent implementation. This project will also include online vaccine verification for patrons.

In scope:

- Designing a desktop application that:
    - Allows inputting each patron’s vaccination status.
    - Notifies CARSA employees of each patron’s vaccination status at a single glance.

    - Displays the most recent 10 patrons.
- Designing an implementable database system to store the vaccination status of each patron.
- Develop an online verification system for the current Vikes Active Living website.
- Design a simple user manual on how to utilize the application.

Out of scope:

- Supporting out-of-province vaccine passports.
- Supporting vaccination status of drop-in patrons.

Constraints:

- Project must be entirely completed with no issues by November 28, 2021.
- Project must not exceed the budget limit of $200,000. This figure includes wages, equipment, systems development, and software.

1.5 Stakeholders

The Devs

CARSA QuickPass is being realized by The Devs. The project team's responsibility is to bring the project to fruition, from planning to implementation. The roles of the individual members are detailed in Section 2.1.

CARSA Administration Client Representatives

The University of Victoria's Center for Athletics, Recreation and Special Abilities (CARSA) is the client for this project. Ben Phelps and Melissa Cartwright currently serve as representatives on behalf of CARSA. They are directly affected by the outcomes of the project, since the completion of CARSA QuickPass would be beneficial to CARSA's workflow and human resource allocation. Ben and Melissa are the primary point of contact with regards to the details of the current system, as well as the objectives and expected capabilities of CARSA QuickPass.

CARSA Employees

The end-users of CARSA QuickPass will be the CARSA employees. They will be directly affected by the outcomes of CARSA QuickPass. The implementation of CARSA QuickPass will substantially reduce the workflow for CARSA employees who were responsible for verifying the vaccination status of patrons, increasing human resources for other operational duties and minimizing the risk of exposure to CARSA employees.

CARSA Patrons

UVIC students, UVIC staff, and any other patrons using CARSA facilities will be indirectly affected by the outcomes of CARSA QuickPass. The implementation of CARSA QuickPass will decrease the length of lines and wait-times that CARSA currently is experiencing. This will allow CARSA Patrons to access the facilities in an efficient and quick manner; this will in turn increase general satisfaction.

1.6 Objectives

The primary goals of CARSA QuickPass are to increase patron satisfaction and CARSA employee productivity. By linking the vaccination status of patrons to their accounts in a database, CARSA QuickPass will be able to notify CARSA employees about the vaccination status of patrons as they enter. CARSA employees will no longer be required to perform manual vaccine verification for each member that enters the facility, resulting in reduced wait times and increased human resources.

CARSA QuickPass should result in reduced facility wait times by more than 50%. Therefore subsequent wait times should be 2 to 3 minutes during peak hours and under one minute during off-peak hours. Given that this project is time-bound, the project should be largely completed and deployed by the end of November 28, 2021. Any issues should be handled prior to then.

1.7 Glossary

Term	Definition
BC Vaccine Passport	A proof of COVID-19 vaccination issued by the government of British Columbia. It is required to enter certain events and businesses.
CARSA	The Center for Athletics, Recreation and Special Abilities is a recreation center on UVic's campus. It is equipped with a gym, a multipurpose fieldhouse, a climbing center, a dance space, fitness classes, and courts.
UVIC	University of Victoria, a university located in Victoria, British Columbia, Canada.
Patron	A person who either pays for a CARSA drop-in session or a person who has an active CARSA membership

Section 2. Project Approach

2.1 Team Organization and Roles

Team Member	Role	Responsibility
Austin Bassett	Software Administrator	He will be responsible for developing all the software for CARSA QuickPass.
Steven Chan	System Engineer	He will be responsible for designing the interaction between CARSA QuickPass and existing systems at CARSA.
Lagan Chohan	System Administrator	He will be responsible for configuring and maintaining CARSA QuickPass.
Michael Kuang	Project Analyst	He will be responsible for overseeing the development of CARSA QuickPass.
Sabrina Lee	Business Analyst	She will be responsible for researching ways to improve CARSA QuickPass and ensuring the project stays within budget.
Mehdi Raji	Quality Assurance Representative	He will be responsible for testing CARSA QuickPass for both usability and user satisfaction.

2.2 Work Breakdown Structure

The following is a list of high-level tasks that will be carried out during this project.

- Conduct the client meetings
- Complete Project Charter
- Confirm, Review and Document Requirements
- Analyze and Document Use Cases
- Complete the Domain Model
- Complete the User Interface Model

- Complete the Final Report
- Present the Project to Clients

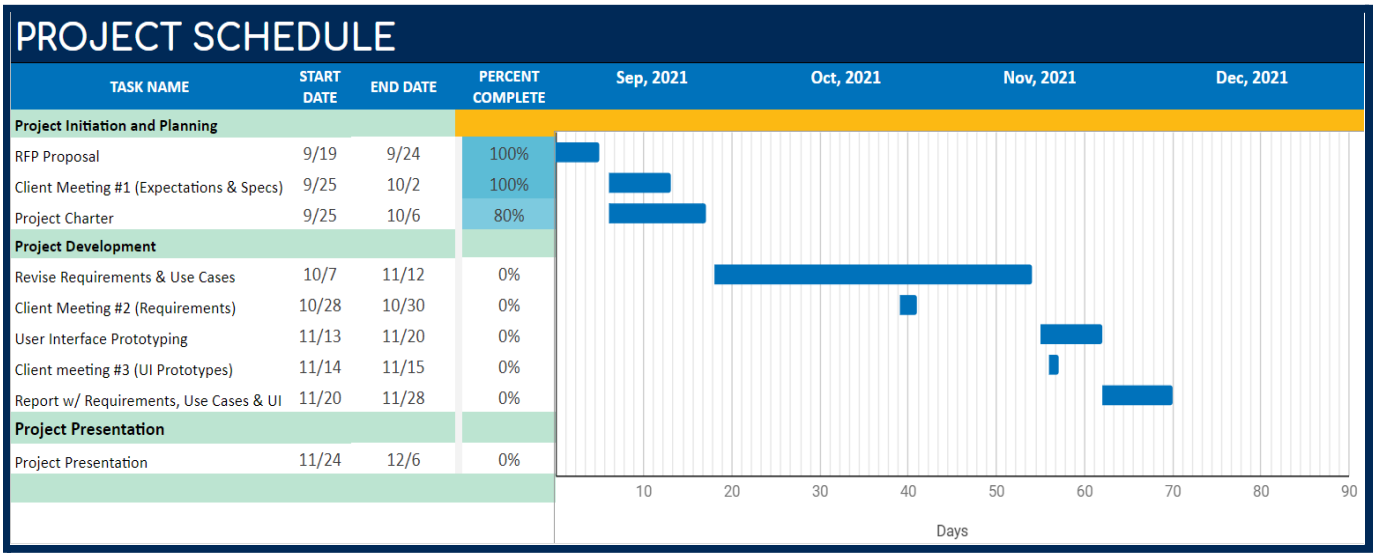
2.3 Milestones

A dated set of milestones such as meetings, presentations, and completion of deliverables

Project Milestone	Description	Due Date
RFP Accepted	The request for proposal is complete and the contract is given to The Devs by CARSA Administration.	September 16, 2021
1st Client Meeting - Define System Requirements	A client meeting with the CARSA Administration to discuss specific business needs and CARSA QuickPass system requirements.	September 27, 2021
CARSA QuickPass Website Creation	The creation of a project website and the addition of the project RFP to it.	September 30, 2021
Report with Requirements	Report with the specified CARSA QuickPass requirements, including specific deliverables and how their success will be measured. This requirements report will then be reviewed by CARSA Administration during a client meeting.	October 19, 2021
2nd Client Meeting - Feedback on Requirements	A client meeting with the CARSA Administration to gain feedback on the report with requirements.	October 28, 2021
Report with Requirements and Use Cases	Perform a documented analysis and modelling of the possible CARSA QuickPass use cases. Add documentation to report.	October 31, 2021
Report with Requirements, Use Cases, and Domain Models	Perform a documented modelling of the CARSA QuickPass domain, including the domain's activity and knowledge. Add documentation to report.	November 14, 2021
3rd Client Meeting - UI Prototypes	A client meeting with the CARSA Administration to understand the UI requirements of the QuickPass application.	November 15, 2021
Report with Requirements, Use Cases, Domain Models, and UI Models	Model the CARSA QuickPass user interface (UI). Add UI designs to report.	November 28, 2021
Project Presentation to Client	Present CARSA QuickPass to the clients. Show them the CARSA QuickPass features	November 29, 2021

	and how it meets CARSA Administration's business requirements.	

2.3.1 Gantt Chart



2.4 Deliverables

Deliverable	Acceptance Criteria	Due Date
Project Charter	An overview section and a project approach section are included.	October 7, 2021
Requirements	Functional and nonfunctional requirements of CARSA QuickPass are included.	October 14, 2021
Use Cases and Model	A use cases explanation and a use cases diagram are included.	October 21, 2021
Domain Models	An entity relationship diagram and a data flow diagram are included.	November 1, 2021
UI Modeling	Prototype screens and associated reports are included.	November 18, 2021
Final Report	All sections must be complete, including appendices and any project recommendations.	November 28, 2021

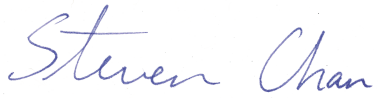
2.5 Risks and Mitigation

Below is a table that outlines any risks that could possibly delay or negatively affect the project. It includes a description for each risk, the probability of the risk occurring (high, medium, low), the impact of the risk (high, medium, low), and the mitigation plan for the risk.

No.	Risk Description	Probability (H/M/L)	Impact (H/M/L)	Planned Mitigation
1.	CARSA employees may not be accustomed to using the CARSA QuickPass system. This may cause delays in system adoption.	M	M	A training session will be planned to provide CARSA employees with adequate system knowledge.
2.	Team members miss time from work, leading to development and deployment delays.	M	L	Depending on time missed, either hire a temporary replacement or distribute the workload to other members in the meantime.
3.	Unexpected software issues arise causing possible system development delays.	L	H	Deal with the issues effectively and in a timely manner if possible. Allow time for performance testing which may highlight long term issues or bugs.
4.	Inadequate communication between clients and analysts, which could lead to a delayed schedule.	H	M	Ensure that the project scope and requirements are well-defined.
5.	Project going over the client-set budget of $200,000.	M	H	Go over the budget in detail with the clients before development, communicate ongoing costs.

Section 3. Approval

An Approval section that identifies the stakeholders and team members responsible for the project and provides a place for them to sign off on agreement with this charter

Name	Role	Signature
Austin Bassett	Software Administrator	
Steven Chan	Systems Engineer	
Lagan Chohan	Systems Administrator	
Michael Kuang	Project Analyst	
Sabrina Lee	Business Analyst	
Mehdi Raji	User Satisfaction and Quality Assurance Representative	
Ben Phelps	CARSA Client Representative, Associate Director, Finance and Operations	
Melissa Cartwright	CARSA Client Representative, Senior Director, Vikes Athletics and Recreation	

Section 4. References

[1] “Carsa - FAQ,” *University of Victoria Recreation*. [Online]. Available: https://vikesrec.ca/sports/2015/12/4/CARSA_1204152346.aspx?path=carsa. [Accessed: 07-Oct-2021