Solution Report

Shire of Chittering – Mobile Application

Executive Summary

The Shire of Chittering would like to build upon their existing application with additional features and functionalities. The objective of this application serves to foster community engagement and provide practical features residents can utilise. The Shire of Chittering aims to implement a minimum viable product (MVP) by the end of 2024 with push notifications, a rate balance display and payment functionalities, while also ensuring the current existing features (fire danger ratings and problem reports) are included as well. They also want to make sure the application is easily maintainable and scalable for future expansions. This report evaluates two potential solutions, considering their impact on the business, implementation feasibility, project effectiveness, and alignment with industry standards. A final recommendation will be provided which will present the optimal approach for achieving the Shire of Chitterings objectives.

Project Overview

The Shire of Chittering, a local government area in regional Western Australia, aims to build upon its pre-existing mobile application to better connect with its residents and provide convenient access to community services. Currently the Shire relies primarily on its website for information broadcasting and uses manual SMS’s for urgent notifications only. The current mobile application was developed by previous North Metro Tafe Diploma students and provides users with fire rating updates and a communication platform that allow residents to submit problem reports to the Shire. However, it lacks desired functionalities such as council rates information, a payment system and push notifications. The Shire aims to implement a minimum viable product (MVP) by the end of 2024. This MVP will prioritize push notifications, rate balance display, and payment functionalities. They also want to make sure the product has room for future expansion to include features like pet registration, news, and events.

## Stakeholders:

* Shire of Chittering residents
* Shire staff and administrators
* North Metro TAFE Diploma students

## Problem Statement:

* Costly and inefficient communication with the community.
* Time-consuming processes for residents and staff regarding rate payments and inquiries.
* Restricted community engagement due to limited communication methods and platform.

Business Requirements

## High-level Objectives/Use Cases:

* **Improved Communication:** Implement push notifications to directly reach residents with critical information and updates.
* **Streamlined Services:** Facilitate convenient online access to rate balance viewing and payments to streamline processes for both residents and staff.
* **Community Engagement:** Foster stronger connections with the community through a centralized platform.

## Relation to Strategic Plan:

The project aligns with the Shire's strategic goals of enhancing community engagement, improving service delivery, and leveraging technology for efficient communication.

## Existing Infrastructure:

* **Mobile App:** Two versions exist, one that did not launch but has a payment system and another that is currently on the google app store which has fire ratings and a problem report communication.
* **Website:** A CouncilConnect website powered by Spark CMS. This is where news, events and information are distributed to residents.
* **Management Software:** SynergySoft for enterprise resource planning (ERP). It manages core business processes and activities
* **Messaging/Notification Service:** Telstra Integrated Messaging Service (TIMS) is currently used for manual SMS broadcasts.

## Major Deliverables:

* **Updated Mobile App:**
  + Push notifications for announcements, news, and reminders.
  + Rate balance display and online payment options.
  + Potential future features (pet registration, events calendar).
* **Documentation:**
  + Technical specifications and user manuals.
  + Project reports and evaluations.
* **Sign-off:** 
  + Project acceptance by the Shire of Chittering and North Metro TAFE supervisor.

## Assumptions:

* The Shire has the necessary budget and resources to support app development and maintenance.
* Residents have access to smartphones and reliable internet connectivity.
* Integration with existing systems is feasible.

## Constraints:

* Limited project timeline for MVP delivery.
* Potential challenges in integrating with existing legacy systems.
* Variable cellular network coverage within the Shire.

Gap Analysis and Opportunities

## Gaps:

* **Limited Functionality:** The current app lacks crucial features like rate payments, push notifications, and comprehensive news and event information.
* **Fragmented System:** Multiple app versions and communication channels exist, leading to potential inconsistencies and inefficiencies.
* **Manual Processes:** Reliance on manual SMS broadcasts is time-consuming and expensive. This isn’t reliable for general notifications, only urgent/crucial alerts.

Opportunities:

* **Enhanced Service Delivery:** Implementing online rate payments and inquiries can save time for residents and Shire staff.
* **Improved Communication:** Push notifications offer a direct and cost-effective way to reach residents with general and critical information.
* **Centralized Platform:** Consolidating information and services within the mobile app can enhance community engagement and accessibility.

Potential Solutions

**Solution 1**: Enhance the Existing Versions of Mobile App

* **Pros:** Leverages existing development work and payment integration.
* **Cons:** May require additional effort to add features like push notifications and ensure compatibility with the existing Flutter app components. Current App also has not been updated for a long time.

**Solution 2:** Build a New Unified App

* **Pros:** Offers a fresh start, allowing for optimal design and integration of all desired features.
* **Cons:** Requires more development time and resources compared to enhancing the existing app.

Impact Analysis

**Solution 1:**

* **Business Impact:** Faster implementation, potential cost savings.
* **Team Impact:** Working with an having an established codebase framework could expedite development.
* **Project Effectiveness:** May face limitations due to the existing structure.
* **Industry Standard:** Align with industry best practice for mob app development.

**Solution 2:**

* **Business Impact:** Requires more upfront investment but offers more flexibility and scalability.
* **Team Impact:** Learning curve associated with new technologies and frameworks.
* **Project Effectiveness:** Potential for a more robust and user-friendly app.
* **Industry Standard:** Opportunity to implement the latest technologies and design principles.

Recommendation

Based on the analysis, building a new unified app (Solution 2) is recommended. This approach offers greater long-term benefits in terms of scalability, maintainability, and user experience. The new app should be developed using a modern cross-platform framework such as Flutter. This will allow for efficient development and deployment for both Android and iOS devices. The app should prioritize user-friendliness, accessibility, and seamless integration with the Shire's existing systems (such as payment authorization).

Conclusion

Making a new mobile app presents the Shire of Chittering with a great opportunity to enhance communication, streamline services, and create a greater connection with its residents. The recommended solution lines up with the Shire of Chitterings strategic goals and offers a platform for future expansion.

Supervisor Sign-Off

Supervisor Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_