

Cost-Benefit Analysis

Objective: To assess the feasibility and implications of prioritizing **PWA (Progressive Web App) development for mobile** over completing the ongoing **CRM Desktop Development** project and subsequently **developing an Interactive Customer Portal**.

Summary

The company is currently focused on a **CRM Desktop Development project**, which includes migrating data from an older system to a new one. There's a proposal to hire an external company to develop a **PWA (Progressive Web App)** mobile app for \$40,000. However, we lack data on what types of phones our users have, and we are uncertain whether they would even choose to download and use the PWA. Given these unknowns, prioritizing the PWA development over completing the CRM Desktop Development could lead to unnecessary costs and potential delays. This analysis suggests that finishing the CRM project first would be more beneficial, allowing us to later create an **Interactive Customer Portal** that automatically adapts to any device, ensuring a better user experience without the risks associated with the PWA development at this stage.

1. Cost Analysis

Cost Factors	PWA Development	CRM Development + Customer Portal
Initial Development Cost	\$40,000 (External Vendor)	\$0 (Internal Team)
Future Development Costs	Potential increases due to updates, maintenance, bug fixes, etc. Estimated at 20-30% of initial cost annually.	Minimal, handled internally
Support and Maintenance	Additional ongoing costs (estimated \$5,000 - \$10,000 annually)	Minimal, handled internally
Opportunity Cost	Delayed CRM Desktop Development	No delay, streamlined process
Total Cost (Year 1)	\$40,000 + Potential Increase (\$5,000 - \$12,000)	\$0

Key Points:

- **Uncertain Costs:** The PWA development by an external company is not a fixed one-time cost. Future updates, support, and maintenance could significantly increase the overall expenditure.
- **Internal Development:** The CRM and Customer Portal development have no additional costs as they are managed by the internal team, offering more control and predictability.

2. Benefit Analysis

Benefits	PWA Development	CRM Development + Customer Portal
Time to Market	Faster deployment of mobile solution	Delayed mobile solution, but faster CRM deployment
User Experience	Mobile app with potential for broad reach, but we lack data on user device preferences (iOS vs. Android) and whether they will download the app	Responsive web portal fitting all devices, including mobiles
Customer Satisfaction	Immediate access to a mobile platform	Improved CRM functionalities leading to better customer service
Long-Term Flexibility	Dependent on external vendor for changes	Fully controlled, scalable solution in-house
Data Integration	Risk of poor integration if CRM not completed first	Seamless integration post-CRM completion

Key Points:

- **User Device Uncertainty:** Without data on customer device preferences, the PWA may not provide the intended value. There is also uncertainty about whether users would download and use the PWA.
- **Integration Risk:** Developing a mobile app before the CRM is fully functional could lead to integration issues, potentially affecting the quality of both systems.
- **Strategic Alignment:** Completing the CRM first aligns better with long-term company goals, ensuring a robust foundation before expanding to customer-facing solutions.

3. Risk Analysis

Risks	PWA Development	CRM Development + Customer Portal
Data Integration Issues	High risk if CRM is not completed first	Low risk, full control over data management
Budget Overruns	High probability due to unforeseen updates and support costs	Low, within internal control
Project Delays	Potential delays in CRM completion	No delays, focused resources
Vendor Dependence	High, external vendor control	None, internal team control

Key Points:

- **Vendor Dependence:** The company would rely on an external vendor for updates and support, which can lead to delays and increased costs.
- **Project Delays:** Prioritizing the PWA could delay the CRM project, which is important for the company's operational efficiency.

Recommendation

It is recommended to **complete the CRM Desktop Development first** and then focus on developing the Interactive Customer Portal. Once the Customer Portal is launched, it will allow us to gather essential data on user behavior, including the number of users accessing the portal and the types of phones they are using. This information will be critical in determining whether a PWA mobile app is truly needed.

By analyzing the effectiveness and adoption of the Customer Portal, we can assess whether it adequately meets our users' needs. If the portal proves successful, the need for a separate PWA may be unnecessary. However, if the data shows that the portal is not fully addressing user needs, we can then make an informed decision to move forward with hiring an external team for PWA development. This approach ensures that we invest in the PWA only if it is justified by user demand and business needs, minimizing risk and maximizing resource efficiency.