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# Proof of Concept (POC) Design Document

Introduction (Ivan)

*Provide an overview of the proposed software solution, its purpose, and potential benefits.*

*The proposed solution is a multi factor authentication system integrated into PiXELL River’s mobile banking app.*

* *MFA includes biometric(fingerprint/ facial recognition), one time passcode (via SMS/email/phone), and third-party app.*

*Define the target user group based on market/user research, personas, and user journey maps.*

* *Individual Customers ages 25-45, moderate to low tech proficiency – concerns about security and accessibility*
* *Business Clients: Entrepreneurs with small/medium sized businesses, requiring secure financial access*

*Explain the specific user needs or pain points that the proposed solution is designed to address.*

* *Enhanced security against fraud, unauthorized access, and phishing.*
* *Flexible authentication options, which allows users to choose their preferred method*
* *Increased user confidence in data protection and financial security*

User Needs and Market Research (Aidan)

*Analyze the user needs and preferences identified in the market/user research, personas, and user journey maps.*

* *Individual customers share a similar key goal of securely managing their personal finances and ensuring their financial data is protected.*
* *Individual customers are concerned that their personal data is not protected.*

*Interpret findings from the provided case study and customer feedback. Identify key insights and trends that inform the proposed solution.*

* *Customer D: Enjoys the mobile app but thinks the security measures on the app are lacking. The customer would feel safer using two-factor authentication or other advanced security features to protect their account.*

*Discuss relevant information from the Internal Report: Digital Services Usage Data and Trends that supports your proposed solution.*

* *A growing number of users are accessing the mobile app, with a 15% increase in the past year, indicating a preference for mobile banking. This statistic, paired with the individual customers’ concern for protecting their personal and financial data indicates a need for a security solution.*

Proposed Solution (Sochi)

*Provide a detailed description of the proposed software solution, including its key features and functions.*

* *To solve the concerns over security with the PiXELL River mobile app, implementing security measures before login using, biometric validation (face id, fingerprint...) and MFA options such as code texting, calling, emailing and even using a third-party authentication app, would strengthen the security of the app.*
* *And to further improve on this, we could include some post login features such as allowing users to toggle the visibility of their balances, account details and other sensitive information such as personal information.*

*Clearly connect each feature or function with a specific user need or preference identified in your research.*

* *Looking at our case study, customer D had expressed that the security measures of the app were lacking and would feel more comfortable using 2FA and other security measures. This is what moved us to include the MFA feature. We chose MFA instead of 2FA because when thinking ahead, it was discovered that 2FA could pose a greater risk of the user losing access to their account in the event that they lose their 2FA details (the phone number or email). Having multiple means to login gives the user an extra login option.*
* *With Individual Customers expressing concerns about the security of their personal data, it only made sense to want to create security even beyond logging in and this is where censorship comes in. Once users are logged in, they are given the option to toggle the visibility of their personal data such as account balances and information as well as their personal information. This gives customers a sense of relief when using the app in public, as they probably would have to often considering individuals use the app to make payments and transfer funds.*

*Explain how the solution is feasible, given existing technology and resources.*

* *Considering how common it is to see MFA and censorship implemented into software applications lately, I would say it is a very practical idea. Technically, the only extra software needed to complete these would be access and probably registration with the third-party applications and that is done on the user’s end. The censorship and other parts of MFA can be implemented using a few more lines of code. Financially, there are a lot of free authentication applications and the financial cost for anything code related would most likely be covered already when initializing code production, no extra costs. It is a sought-after feature based on our research, and I think it would help drive the business forward should it be implemented.*

Feasibility Analysis (Ivan)

*Evaluate the potential for success of the proposed software solution based on your user needs and market research.*

*Discuss any potential challenges or obstacles, and propose strategies for overcoming them.*

*Address how the solution fits within the broader market context and trends identified in the Internal Report.*

* *User trust in biometric security – provide clear communication on data policies and any features that a user may need to opt-int*
* *Compatibility across devices – implement multiple options for older devices such as those with or without certain biometric readers- facial recognition/fingerprint*
* *Compliance with bank security regulations – ensure the POC follows the authentication standards*
* *Setup – offer setup tutorial in the language of the device*

UX Design (Aidan)

*Describe the user experience design of the proposed solution, focusing on usability and user satisfaction.*

* *In the users account settings, the MFA options will be listed in the account security section. The user will be able to implement the MFA option that they choose with simple steps. Each MFA Method will be explained to the user during the setup.*
* *For the SMS option, the user will be presented with the 2FA screen explaining that they must enter a SMS code to access their account. When the user is ready, they will click “send now” and receive a text message containing a code to their mobile device. Once the code is entered into the text box they’re granted access to their account.*
* *For the phone call option, the user will be presented with a 2FA screen explaining that they must enter a code that they will receive via phone call into the box before accessing their account. When the user is ready, they will click a “call now” button and the phone call will come through. After entering the code, the user has access to their account.*
* *Face ID and touch ID: The user can enable Face ID or Touch ID in their account security settings. When the user opens the app, they are presented with their preferred biometric login method. Face ID will simply scan their face; touch ID will match their fingerprint.*
* *For 3rd party apps, when the user logs in to PiXELL River mobile app, they will be presented with a screen asking for the code from whichever 3rd party authentication app they have chosen previously in their account security settings.*

*Use user journey maps to illustrate how users would interact with the solution, demonstrating its ease of use and efficiency. A screen shot of a computer

AI-generated content may be incorrect.*

*Discuss any design principles or best practices you followed in designing the solution.*

Innovation (Sochi)

*Highlight the innovative aspects of your proposed solution, explaining how they offer value to users and differentiate the solution from existing products or services.*

* *It’s not exactly innovative as much as it is necessary. Adding these features wouldn’t differentiate PiXELL from other apps but would strengthen the brand for adding an important feature.*

*Explain how the innovative features or functions of the solution are feasible and how they contribute to the potential success of the solution.*

* *The new features in the app create a feeling of security with the users. When users see that the app is more secure, they are encouraged to want to use the app. Implementing these features based on user review also gives the customers faith that the brand listens to the people and would create an even better relationship between users and the brand.*