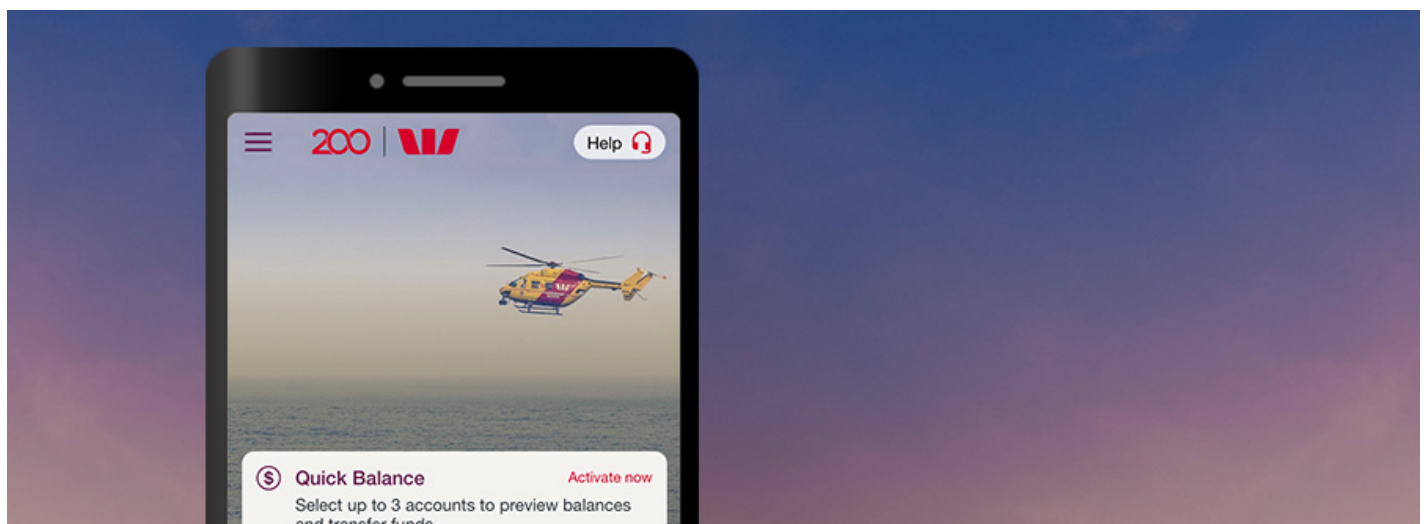# User-Centered Design - Assignment 1

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Westpac Banking Corporation - Westpac Mobile Banking App

Part 1: Analysis of Application

Introduction

The following analysis covers the Westpac Mobile Banking App (Application) for iPhone and Android, owned by Westpac Banking Corporation. This app is designed for personal Westpac banking customers across Australia, to provide access to secure information relating to their own banking and access to functions including varied account, card and transactional services. Other online versions of banking are available (a tablet app and the desktop PC version) however, this report only covers the mobile phone app.

In this report the focus will be on an individuals ability to access the app (sign in) and to move money - specifically between their own accounts, to other peoples accounts domestically, to organisations using Bpay and to other peoples accounts internationally.

The results will provide analysis on how well the current functions work and what improvements can be made within the exisiting functionality from a users perspective.

Part 1.1 - Users groups and attributes

Basic implied attributes of any user include the ability to complete tasks including signing in to online services (basic computer literacy) and current use of smart phone apps. These attributes are identified in Section 1 of the survey in "About you". Where these attributes do not meet a standard of the target audience the results can be filtered out of the overall results.

	Group 1 - Money moving banking	Group 2 - Standard banking	Group 3 - Information banking
Attributes	• Existing Westpac personal banking customer • 25 - 60 yo • Professional • Average net financial position $100k+ • Number of bank products 3 or more • Generally home loan and credit card products • Higher frequency of online initiated transactions than other types of transactions (card excluded) • Likely metro address on file • Intermediate to advanced app user • Prefers self-service over other methods	• Existing Westpac personal banking customer • 18 - 60+ yo • Student, professional, retired, unemployed • Average net financial position not considered • Number of bank products a few as 1 • Transaction and savings account, possibly credit card and loan • Beginner to advanced app user • Only use app when and if required but prefers online to other banking methods	• Existing Westpac personal banking customer • 12 - 60+ yo • Student, professional, retired, unemployed • Average net financial position not considered • Generally 1 or more bank products • Generally not lending products but multiple transaction or savings accounts • Beginner to intermediate app user • Prefers to call bank if a problem is encountered
Tasks	• Regularly signing in for information - set up for simple sign in (fingerprint, FaceID, Passcode) • Keeping abreast of notifications and alerts in app inbox • Obtain information: balances, past transactions, tax summaries, interest charges and payments • Review bank fees • Setting up international payees via the Desktop version of Westpac Online Banking	• Semi-regular sign in to app • Obtain information: balances, past transactions • Performs funds transfers and payments to others, may have not required international payments • Review bank fees	• Happy to use other methods (such as branch or phone call) to make transactions • Obtain information: balances, past transactions

Part 1.2 - Main Tasks

As the banking app as a whole covers may different areas of consumer banking (stopping and replacing cards, disputing transactions, changing personal details etc), this report will only focus on the sign in process and the ability to move money.

Signing In

The app requires one primary set of details to sign in initially - a Customer ID and Password (6 characters). Once signed in, an option for a 'Simple Sign In' is given, where by a user can opt to use a 4 digit Passcode, the Fingerprint already established for access to their smart phone device or similarly FaceID if available on the users particular device.

Overcoming a failed sign in is where most issues would be experienced by users. The app, and the users entire online banking access, will be suspended after 3 failed attempts at signing in (not only 3 consecutive attempts, 3 attempts over time was also result in suspension). This is a security measure and is also an important part of the sign in task, assurance that users expectation is met that only authorised users can gain access to their own financial information.

Links on the sign in page allow for users to retrieve their Customer ID and/or reset their password - regaining their set of primary details for signing in. These links require other details to be provided by the user to pass an identification/security process which if also failed will then refer the user to contact the Westpac Online Banking Support team by phone for assistance.

Transfer funds (Transfer)

This task refers to transferring funds between the users accounts they already hold with Westpac themselves. The task holds no functionality when the user has only one account with Westpac, it does not allow funds to move to any accounts that do not already appear on their profile when they sign in.

Make a payment (Pay)

Different from the transfer funds task, *Make a payment* refers to all other options available to move money to another account, regardless of the owner of the account or the financial institution that account is held with. This includes payments to organisations known as Bpay payments and payments to other countries known as international payments.

This task would arguably be the most useful considering prior to online banking this task would only have been available by a banking customer physically attending a bank branch, by writing a cheque, organising a wire transfer (also by attending a branch) or by dealing in cash. This task assumes the user has the correct details to input when prompted (BSB, Account number, Billler Code, CRN etc).

Part 1.3 - Analysis of app

The following analyses the current app functionality is measured against Krug's 3 laws of usability. Although not many areas of improvement are expected to be found, considering large Australian corporations like Westpac Banking Corporation generally prides themselves on customer service and easy of use of their products, some initial feedback will be provided against the current usability and this will then be compared to survey results.

Krug's 1st Law: "Don't make me think."
To some, banking is simple (user groups 1 and 2), to others, banking is not as simple and infrequent use means not learning the processes involved (user group 3). In saying this, the tasks covered in this report should not require any learning. For the most part, there is very little, if anything, to learn when performing tasks for the first time, yet some banking jargon may exist as a prerequisite, to know the difference between a *transfer* and a *payment* for example. While most users (from all user groups) would potentially have an issue only the first time they performed any of the tasks in this app, there is help available at each step of the task in the form of "?" symbols which provide a full explanation.

The possibility of combining both *Transfer* and *Pay* would be an initial suggestion, as the *Pay* task covers payments to all accounts, this would certainly cover payments to a users own accounts. However, this raises the question that the tasks are different by design to favour the user - if money is moved by *Transfer* it can easily be reversed if an error is made, if money is moved by *Pay* it cannot be reversed.

Krug's 2nd Law: "It doesn't matter how many times I have to click, as long as each click is a mindless, unambiguous choice."
Being a banking app on a secure connection, where security and minimisation of risk is in reality of more importance that the streamlined usability of the app to accomodate all users, the app balances these priories well. While each step in the task is one more for the user to review before finally reaching the "Submit" button to send money to someone else (after as little as 11 clicks), each click follows an expected, unsurprising process where information is needed to be input, reviewed or confirmed.

Where the choice becomes somewhat confused is where the app does not actually provide the option to complete a task that it implies can be performed. Specifically international payments, which can only be performed in the app if the user has already set up an international payee using the desktop version of Westpac online banking. This is not made clear for the user, instead redirecting the user to a different task altogether (making a domestic payment).

Krug's 3rd Law: "Get rid of half the words on each page, then get rid of half of what is left."
This is an area that the bank does well with. The content in terms of actual copy is minimal, using no more than 2 words for each input being asked of from the user. Yet even with very little words to read, it is very simple to understand what "From" and "To" mean in reference to a transfer of funds or making a payment, complemented by their position on the page and accompanying drop down box options.

Part 2 - Survey and Report

The following reviews the survey issued to a closed group of existing Westpac customers who use or have used the Westpac Mobile Banking App.

The survey can be found at this link or at the this URL
https://docs.google.com/forms/d/e/1FAIpQLScKyvufYkmMFRHFPz19lM_3JdCN6bGkTSc0C0XeyAtcjtqHrg/viewform?usp=sf_link

The summary of results can be found here and a spreadsheet with the results has been shared with the appropriate parties prior to the submission of this report, **but can also be accessed here.**

The aim of the survey is to specifically gage feedback on how easy the app is the gain access to (successfully sign into a banking session) and identify any problems relating to sign in details or failed sign in attempts (being suspended from online banking). Furthermore, once signed in, this survey aimed to understand users perception on how easy it is to perform common tasks relating to moving money between users own accounts and sending (paying) money to other people and places, identifying if there is any confusion in how to perform these tasks in particular. None of the other many tasks available within the app are targeted by this survey.

Results should provide suggestions on how the average intended user finds the existing usability could be improved, if they are in sufficient working order or is there is any functionality that is missing, confusing or incorrect.

Screener question (Part 2.1)

As this survey was already issued to a closed group of Westpac customers, the screener question was an option given in section one simply to advise the user to not continue if they were not a current user of the app.

Are you a Westpac customer who uses the Westpac Mobile Banking App?

If you are not a Westpac customer and/or do not use the Westpac Mobile Banking App you do not need to complete this survey. Thank you for your time.

Survey participants (Part 2.2)

Section one of the survey covers a brief question on how often users actually engaged with this app and also a broader overview of their behaviour regarding app usage and skill level with technology in general. This assisted, in combination with sections 2 and 3, to determine which group the survey participant belonged to, which would, to an extent, allow the responses to be weighted in order of relevance. For example, responses to questions relating to international payments would be weighted less from users who respond that their use of this task is minimal or null.

Survey questions - overview of results from survey (Part 2.3 & 2.4)

Section 1 - About you
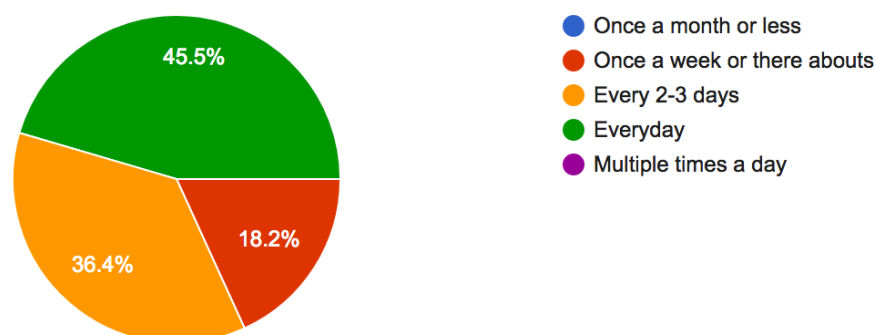### Are you a Westpac customer who uses the Westpac Mobile Banking App?

100% of users surveyed answered yes, this was the screener question.

How would you rate your overall smart phone app usage (of all of your mobile apps combined)?

The majority (80%) of users considered themselves often or constant app users across all apps, using apps at least 20 times per day, indicating that these users have many other apps to compare their user experience with. The following question asked how technically skilled the user was and over 70% considered themselves confident with use of apps and technology in general.

How often do you check on your banking?

An assumption can be made that "checking on your banking" will include just quickly retrieving a balance, which most survey participants do on a regular almost daily basis.

● Once a month or less
● Once a week or there abouts
● Every 2-3 days
● Everyday
● Multiple times a day

Section 2 - Accessing your mobile banking
This section now asks questions that attempt to understand issues that may worsen the usability of the app, in particular not being able to sign in or experiencing a failed sign in attempt and being suspended from online banking.

Have you ever been locked out or suspended from your Westpac Mobile Banking App?

With a majority of participants (64%) indicating that they have not been suspended it would be assumed that the app does well in balancing usability and the obvious need for security and privacy when dealing with financial information.

The next question however suggests that for those who have been suspended some improvements could be made to regain access to the app, as the majority had to perform a phone call to a support team for assistance. There would be an argument for security and privacy being the reason for the need to speak to bank support staff, however this may also suggest that the online reset password option could be improved.

Have you encountered any other specific issues in gaining access to the App that have required you to call Westpac?

This next question now clarifies what specific issues participants have had in gaining access to the app.

Participant 8 says *"The Customer ID is not available even after you have signed into the app, you have to do the retrieval of ID before signing in to get access to it",* and participants 1 and 5 both agree that they didn't have their Customer ID and this was the reason they could not gain access. This suggests that the online retrieval of Customer ID process is flawed, however it may again be caused by the banks policies around security, privacy and risk assessment.

Do you have access to your Westpac Customer ID?

This now addresses how commonly participants have access to their own Customer ID, with a fair segment relying on the app to remember this information for them.
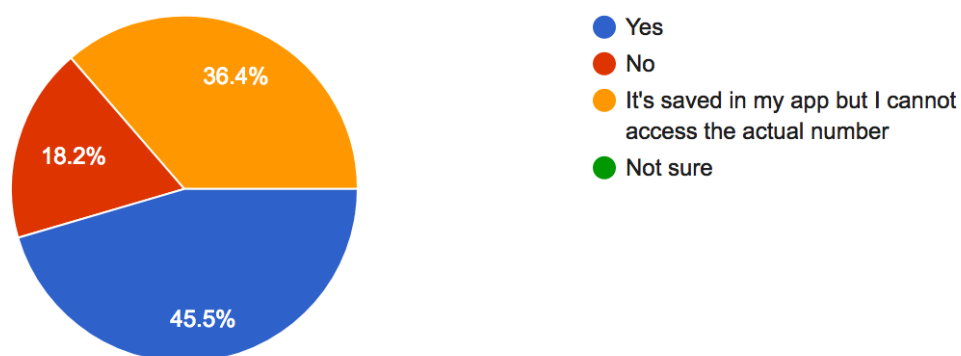

As previously mentioned by participant 8, an immediate suggestion for improvement would be to have the Customer ID available to the user once they have already confirmed their identity by successfully signing into the app.

Which form of security to do you use to access the App?

This question provided varied results, suggesting this would be depended on the capabilities of the users device more so than the app which does cater for different methods of confirming identity and securing privacy. No real world conclusions can be made from this information without further probing, other than each option is being utilised that there would be no benefit in changing these options.
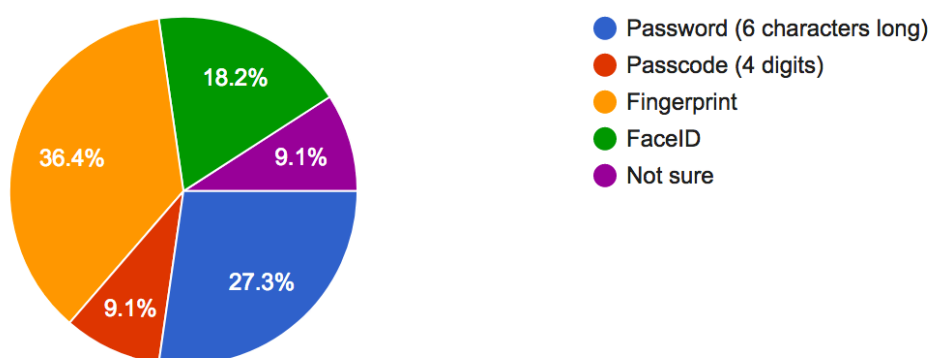
A convincing 73% rated the easy of use accessing the app either 4 or 5 out of 5. Not a surprising result for an Australian corporation which has other corporations as major competitors.

Section 3 - Moving money

This sections asks for further details on how often the different moving money options are being utilised, how clearly they are defined and how easy they are to use.

How often do you need to transfer money between your own accounts?

This question provided a varied response but suggests that this task is performed frequently. The following two questions are an extension of this including payments to other people and organisations including overseas and again the frequency of use of this task is often but varied (less for international payments). This would understandably depend on the individual participants personal preferences, needs and circumstances.

More importantly a majority of participants (73%) understood the difference between *Transfer funds (Transfer)* and *Make a Payment (Pay),* suggesting no changes would need to be made to app to accomodate confusion in this area. Only one participant commented further "*Make transfer and pay the same button, they don't need to be two different options*". This contradicts the assumption that users may have difficulty determining the difference between these tasks.

Are you clear on the process to follow to make an international payment?

Less clarity was evident in the result to this question with only slightly more participants (55%) understanding clearly how to make an international payment. This would also be lower as participants indicated that 40% only performed an international payment once or twice a year and less use of the need to perform this task would correlate with less understanding of the process. This is reiterated by most participants selecting international payments as the most confusing payment option available.

Further investigation provides a clear opportunity for improvement within the app and performing the task of international payments specifically. Below is a workflow for attempting to make an international payment in the app, which actually takes the user to perform a domestic payment instead without any explanation that the app does not allow for new international payment to be performed.
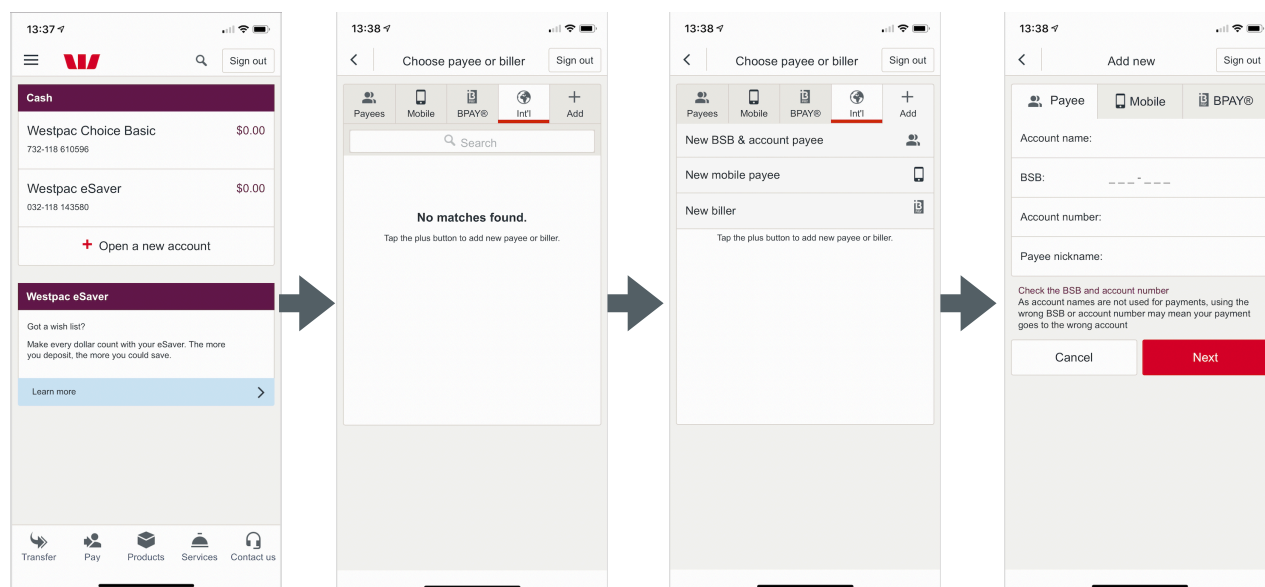
A message advising that new international payments cannot be performed in the app and that signing in the the desktop version of online banking is required would easily remove any confusion with this task.

Based on existing assumptions, a previous question addresses this directly and participants were mixed in their responses as to whether this was confusing or could be improved. This could be due to those who performed this task belonged to user group 1 who generally had more experience with the app and did these tasks with more frequency.

Section 4 - Feedback

Open questions concluded the survey with an opportunity for participants to provide feedback verbatim on both the tasks of moving money (within survey Section 3) and the app overall. Responses provided were mainly outside the scope of the survey's purpose referring to other technologies in the market or improvements not relevant to this report's areas of focus.

An overall rating of 8 or 9 out of 10 by over 60% of participants and no ratings below 5 out of 10 suggests that most participants were satisfied with the app in general however, as covered some areas of improvement were identified throughout the survey.

Suggested improvements that Westpac could make as a result of this survey are:
- Revisit the retrieval of Customer ID and password reset tasks for customers who are suspended due to failed attempts
- Allow for Customer ID to be available within app once a successful sign in has been achieved
- Possibly combine *transfer* and *pay* tasks if there is no significant reason to have them seperate, the fewer options available the better
- Inform customers attempting to make international payments via the app that this function is not possible unless they first add the international payee via the desktop version first. Alternatively, allow for international payees to be added via the app so payments can be made without use of the desktop version.

Conclusion

With some small areas of improvement identified above, overall the Westpac Mobile Banking App has clearly been designed with the users experience as a priority. Being that many responses relate to the ease of gaining access to secure financial information, the challenge here would be to balance the users desire for usability with their expectation for security and privacy, which overall is done well.

References

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‣ Westpac.com.au. (2018). Mobile Banking | Westpac. [online] Available at: https://www.westpac.com.au/personal-banking/online-banking/ways-to-bank/mobile-banking/?pid=wl-ways-to-bank-clp-mobile1 [Accessed 6 Oct. 2018].