Sprint 0 Product Brief

Haptic Feedback

[Epic #4314](https://app.zenhub.com/workspaces/va-mobile-epics-636d76f8c818bf0010e50a41/issues/department-of-veterans-affairs/va-mobile-app/4314)

### Problem Statement

The application currently has no haptic feedback, or haptics. Haptics can be a powerful accessibility tool that the app can use to increase usability for many different Veteran segments.

**Current Experience**

* There are no haptics within the application.

**Pain Points**

* We don’t want overkill but we need the accessibility enhancement to continue to be leading edge

### Assumptions and Level of Confidence

* Haptics is a great way to improve usability and accessibility within the app.
* Haptics work should be relatively straightforward for the initial versions.
* Research has shown that haptic technology intensifies the experience of immersion and immersive technology is known to increase user retention by 45%.

### Risks

* Haptics can become annoying or distracting for some users and will need to have settings to tune them for each user. We should think about how we present haptics in the app, how to let users know they can turn it on/off and how to track users actions regarding haptics.
* Haptic patterns are standard, but some users may need a way to learn the patterns. Does this need to be in the app somewhere?
* Keeping haptics consistent when adding future features.
* Is there a WCAG or accessibility spec around haptics?
  + Based on research, there are no official WCAG or industry guidelines in terms of haptics. There is a guideline concerning consistency that could be impacted if we were to over utilize haptics within the app, but there are not haptics-specific rules.
* [Outlined in this article](https://sheribyrnehaber.medium.com/improving-native-app-accessibility-via-haptics-66ad190d1e30):
  + *The REALLY important thing is to set a haptics standard that is consistently used within an app and across apps under a single corporate umbrella. Otherwise, a confirmation haptic vibration for one app may have been used as a critical error message on another — that would be an awful user experience at best, and possibly a WCAG* [*consistency*](https://www.w3.org/TR/UNDERSTANDING-WCAG20/consistent-behavior-consistent-functionality.html) *violation at worst*
* Not an awesome way to measure success?

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### Business Goals

* Introduce haptics in a way that assists users

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### Roadmap

Please see the [Haptics Recommendations](https://docs.google.com/document/d/1R-u8PQQXo11-V3mSHTPsH7h_rrXfWKpIJP3nRVJzHY8/edit#) doc

**V1**

* The recommendations for haptics are to add heavy haptics to toggles, and to add the four patterns for Alerts. These are the haptics shaded green in the recommendations document.

**V2 and beyond**

* There are multiple additional haptics that can be reviewed and added into the app within the doc that will need to be reviewed and tested.

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### Technical Approach

There has been a spike. An old branch [spike-haptics](https://github.com/department-of-veterans-affairs/va-mobile-app/tree/spike-haptics) on github that proved out the ability to add these into the apps.

### Rules and/or Guidelines

* Although there are no official WCAG guidelines on haptic feedback, there are guidelines regarding consistency. We want to keep things simple and consistent across the app.
* Haptic feedback should be toggled to “off”, by default. The user must opt in to turn haptics on within the app.
* Rely on predefined haptics within the OS and avoid creating custom haptics.
* Don’t use haptics by themselves. They should reinforce other audio and visual cues or other motion / gestures (scrolling through a list, long presses, or transactions).

### Measuring success

* Positive feedback in usability sessions and app store reviews
  + Veterans trust the app because minor details are considered
  + Can we find folks to give us feedback on this?

### Stakeholders

* Chris Johnston – PO
* Martha Wilkes

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### Important Links

Please see the [Haptics Recommendations](https://docs.google.com/document/d/1R-u8PQQXo11-V3mSHTPsH7h_rrXfWKpIJP3nRVJzHY8/edit#) doc for more links and for a detailed run-down of haptics in mobile apps.

[Improving Native App Accessibility via Haptics](https://sheribyrnehaber.medium.com/improving-native-app-accessibility-via-haptics-66ad190d1e30)