Ad Hoc

VA Mobile App Discovery Sprint

Week 4: Synthesis

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Agenda

- ➔ Where did we land?
  - ◆ Technical Feasibility
  - ◆ Veteran Desirability
- ➔ Where do we go next?

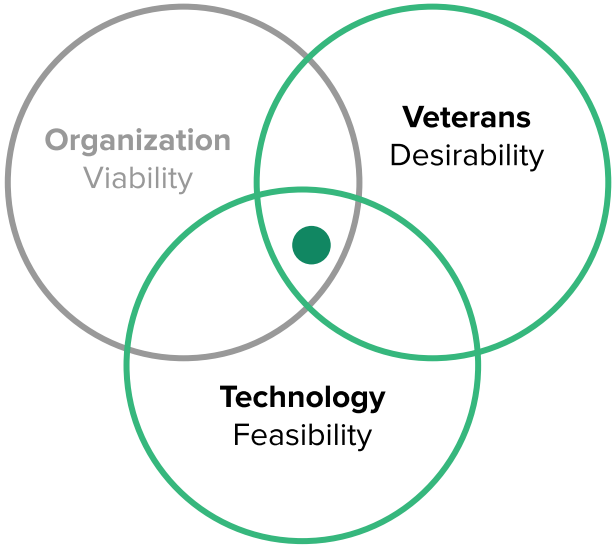
Schedule

Week(s)	Guiding Question	Activities	Output	Outcome
0	What feature sets + frameworks should we evaluate from a technical feasibility and Veteran desirability perspective?	1. Discussions with CTO's office 2. Discussions with VA technical SMEs	List of mobile app development frameworks and features to evaluate	Consensus on feature set + frameworks to be researched in coming weeks
1	What feature set + framework should we prototype?	1. Evaluate feasibility of mobile frameworks using matrix 2. Begin to research Veteran desirability of features using matrix	- Research findings - Recommendation on what to prototype	Consensus on which technical framework and feature set to prototype
2 + 3	Is this prototype a viable option for the VA? Does it speak to Veteran needs?	1. Technical experimentation 2. User research and usability testing	Technical and user research findings	Feedback and input on how to iterate on prototype
4	What are the pros/cons to different technical approaches and the impact of implementing them to the VA?	1. Future proofing 2. Synthesis	Report and prioritized recommendations	Comparative analysis of technical frameworks and synthesis of Veteran desirability findings

Where did we land?

We think VA should use React Native to build an authenticated app that gives Veterans access to their personal data

Where we started...



Highest-value solution

Veterans

- **Hypothesis:** There are gaps in Veterans' digital experience that can be filled with a native mobile app

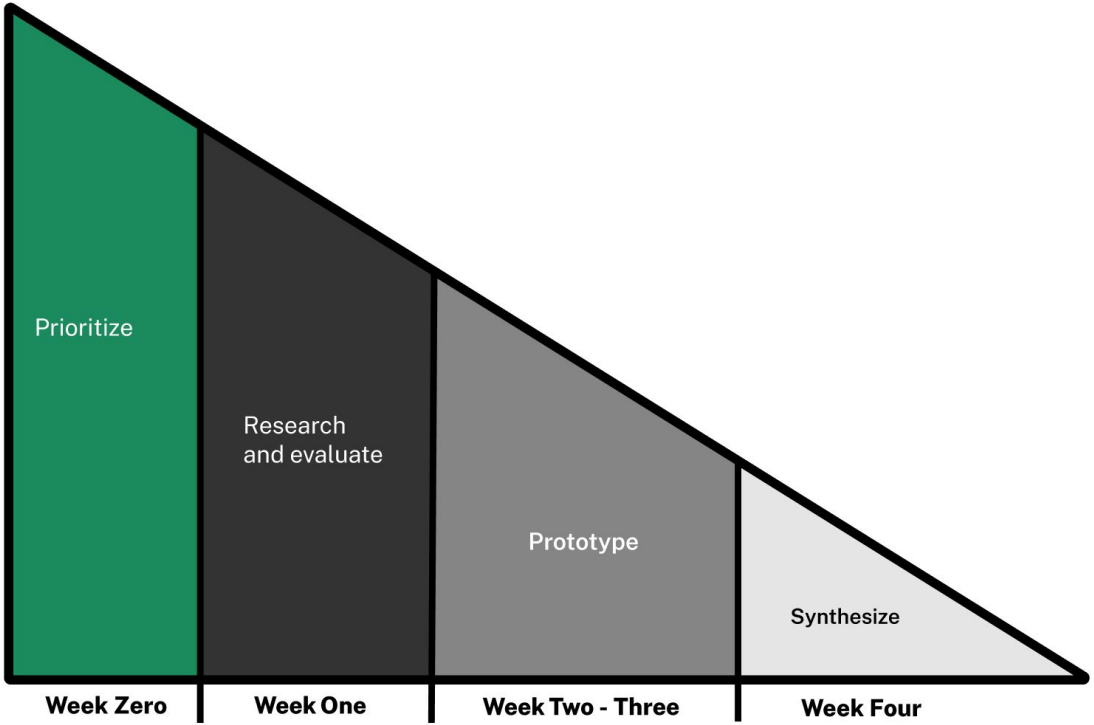
Technology

- **Hypothesis:** It is not only technically feasible for the VA to have an native mobile application but it will align and reinforce the agency's digital strategy

Organization

- **Hypothesis:** Key stakeholders are enthusiastic, aligned and willing to fund initial investment and continued support of a native mobile app

What we did to test our hypotheses



What we learned

Veterans

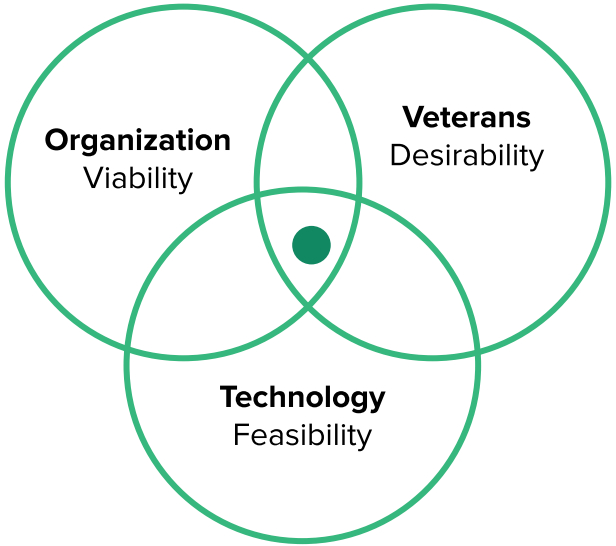
- **Hypothesis:** There are gaps in Veterans' digital experience that can be filled with a native mobile app
- **Finding:** Veterans see value in authentication on a mobile app because they view it as safer and enjoy personalized features, such as direct communication with the VA

Technology

- **Hypothesis:** It is not only technically feasible for the VA to have a native mobile application but it will align and reinforce the agency's digital strategy
- **Finding:** There are multiple frameworks (including React Native and Ionic) that the VA could implement to build a mobile app but implementation will rely on development work to enable login and support APIs

We think VA should use React Native to build an authenticated app that gives Veterans access to their personal data

How do we validate this bet?



Highest-value solution

Veterans

- Does the mobile experience need to be personalized (and therefore authenticated)?
- If so, what are features that are highest priority?

Technology

- Will login work by enabling the VA.gov-centric part of vets-api to accept OAuth?
- What are the risks of React Native?

Organization

- Is React Native a viable framework for the VA in the long term?
- If so, how would the VA manage codebase and what would the impact be to existing teams?
- What new teams would be needed for building the app and maintaining it over x number of years?

Technical Feasibility

Schedule: Technical Feasibility

Planning		Week 1	Week 2	Week 3	Week 4
Frameworks	Guiding Questions	Activities		Output	Outcome
1. Fully native app (iOS + Android) 2. Cross-platform (React Native) 3. Cross-platform (Xamarin) 4. Cross-platform (NativeScript) 5. Hybrid (Ionic) 6. Hybrid (Ionic React) 7. Hybrid (Flutter) 8. PWA (Progressive Web App)	1. How much reuse is possible? 2. What would the investment be? 3. How does the UX change?	Technical analysis to develop initial hypothesis	Experimentation	Continued Experimentation and comparison	Recommendation for which framework is the most technically feasible

This is what we did

- ➔ Evaluated hybrid and cross-platform frameworks by researching and building small prototypes
  - ◆ UX impact
  - ◆ Developer experience / tooling
  - ◆ Component reuse
- ➔ Researched the VA API as it stands today
- ➔ Determined a path for mobile login

Here is what we learned

- ➔ Evaluation showed that React Native seems to be an excellent framework
  - ◆ More native-style UX (better polish)
  - ◆ VA.gov developers found tooling powerful and easy to pick up
  - ◆ No direct reuse from VA.gov (yet there is upside to this)
- ➔ Ionic is also viable
  - ◆ Main benefit is code reuse - but that also adds risk to VA.gov (more brittle FE, requires tighter coordination between teams)
- ➔ Identified four ways to implement logon and prioritized enabling OAuth as the most feasible option
- ➔ Features will drive tech decisions

This is what we still want to know/test

Frameworks

- ➔ What are the downsides of React Native?
- ➔ Assumption: That React Native enables all the things we need. We want to find where the edges are. Where would we need to go full native. How easy is that integration between RN and full native?

Backend

- ➔ Can we unblock mobile logon by enabling OAuth?
- ➔ What will a "mobile API" look like? Reusing vets-api directly could impact other teams

Next Technical Steps

Build a prototype app in React Native

➔ Fail fast. Lets identify the limitations of React Native; at what point would we want to go fully Native?

Build mobile login with OAuth

➔ We’re going to need this. Start now.

Veteran Desirability

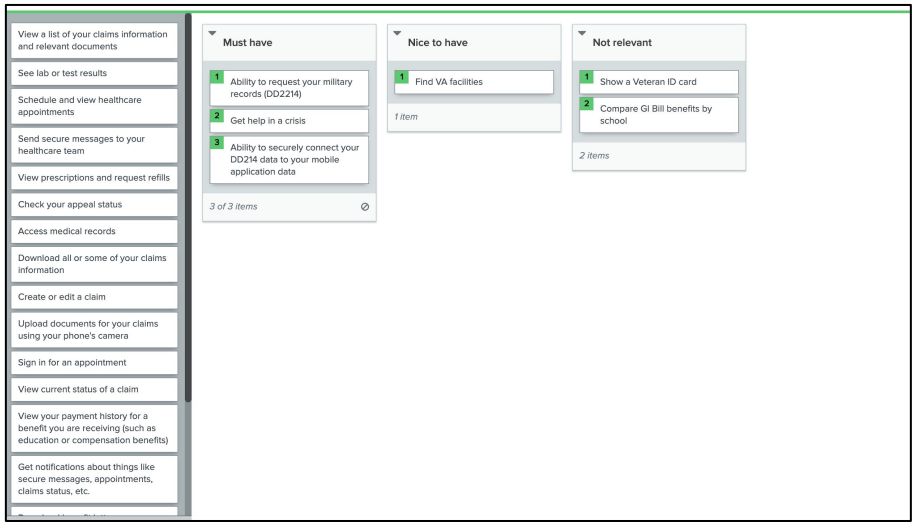
Schedule: Veteran Desirability

Planning		Week 1	Week 2	Week 3	Week 4
Feature Areas	Research questions	Phase One	Output	Phase Two	Outcome
Login	What are Veterans preference when logging in to VA mobile?	Card sorting (unmoderated)	Use card sorting results to develop prototype ideas	Finalizing prototype, perform usability testing with Veterans on prototype	Prototype and recommendations for **VA mobile login experience**
Initial screen/ Dashboard	What initial screen do Veterans expect/need to see after they log on to VA mobile?				Prototype and recommendations for **VA initial VA mobile screen**
Taking an action on the app	What interactions do Veterans want to be able to perform on VA mobile?				Prototype and recommendations for **VA mobile interactions**

Veteran Desirability

Core Activities

CARD SORTING (REMOTE + UNMODERATED)



USABILITY TESTING (MODERATED)

Click on image to view full prototype

Most Veterans stated that **they would expect to see a personalized experience when initially logging in** to a VA Mobile experience.

"I would hope to see a master menu that would let me see the choices for this app." - P2

"I would expect to see the actual different parts of the website. Click here to go there, or whatever." - P1

"There's nothing else that's told me so far within the app, so I expect something that tells me a menu of things I can do." - P4

"It's critical that it's intuitive and easy to use. I know that's hard! When you hold conversations with people like me. It's good to be clear about the desired purpose of the app, then it can help me formulate response." - P4

All participants stated that a VA Mobile App would **make it easier for them to connect to VA staff** about their VA related services.

"When you talk to an actual human, it's more personal and you can ask your specific question." - P1

"It's nice to have the immediacy, I always have my phone with me. I like having the ability to access certain things, like mental health. If I'm out somewhere having a panic attack, I am not going to be able to get back to my computer. It's the one thing that stays with me all the time. Certainly, anything that has an immediacy component, I would really like to see here." - P2

"I would expect to see a way to talk to my doctor with questions." - P4

"I would expect to be able to talk to my doctor, or send an email to my doctor." - P3

All participants **felt comfortable using biometrics** when logging in to a VA Mobile experience.

“It’s like a 50/50 chance that it [cloud based log in] will actually work, but Face ID is really dependable.” - P2

“That sounds like it would be nice and easy. Especially for older people this would be helpful.” - P4

This is what we still want to know/test

Validate the core feature set. A few core features we are looking at are the ability to edit Veteran profile data, viewing your claims status and append documents to claims.

Finding the mobile experience gaps. What gaps are there in the mobile experience of VA.gov that can be filled with a mobile app?

Next Veteran Desirability Steps

Continue and expand on user research for
Veteran-centered feature sets

➔ Validate our Veteran-centered assumptions at scale

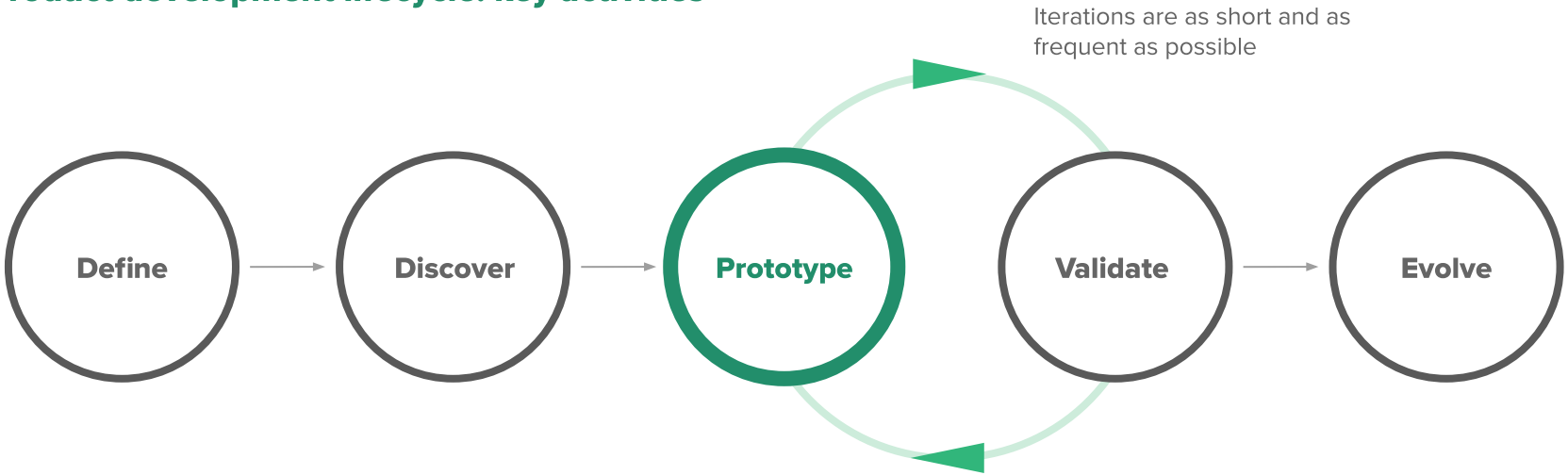
➔ Continue to collaborate with VA stakeholders on research

Create next phase of VA Mobile app usability testing

➔ Learn, iterate and test our assumptions to help inform **Technical Feasibility** MVP prototypes

Where do we go next?

Product development lifecycle: key activities



- → Problem definition & goal setting
- → Formative research, concept design and experimentation
- → MVP definition, product strategy & roadmapping
- → Generate insights to inform next iteration

MVP spectrum of investment

Anonymous
w/ public information

For example:
- ➔ Push COVID-19 notifications
- ➔ Access VCL
- ➔ GPS Facility Locator

Personalized
See/change *some* data

For example: Anonymous +
- ➔ Edit profile
- ➔ Claims status
- ➔ Append docs to claims

Full-spectrum
See/change most data

For example: Personalized +
- ➔ Health data ← Cerner complexity!
- ➔ Personalized notifications*
- ➔ Chat-based assistant*

* Expanding beyond current VA.gov capabilities

Bets

- ➔ **Features** that require authentication are more valuable to Veterans (whereas unauthenticated features are not compelling enough to drive download)

- ➔ **React Native** provides the best balance between organizational viability and technical feasibility

- ➔ **Login** can be accomplished by enabling the VA.gov-centric part of vets-api to accept OAuth

OUTPUT: Recommendation for MVP

Next Steps

Next Week

What you can expect from us next week:

- ➔ Final report
- ➔ More specific planning to follow on activities
- ➔ Continued cadence of weekly check ins to share our progress

Thank you!