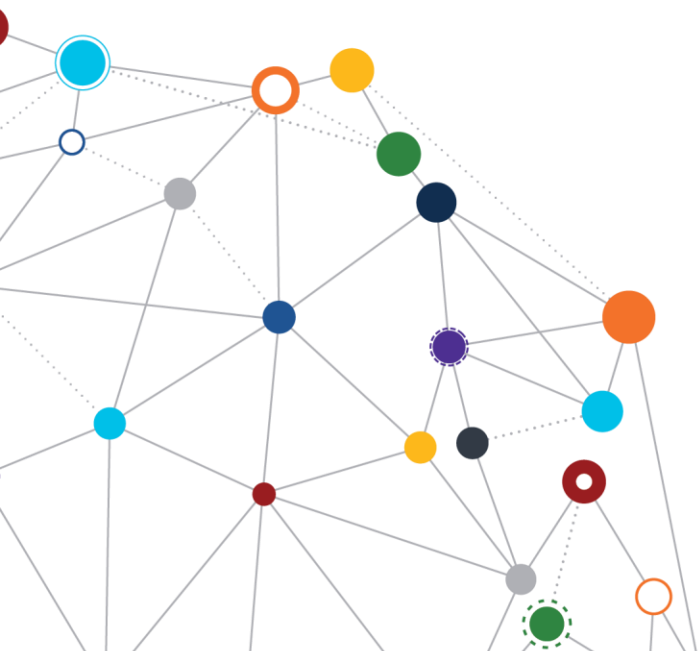OFFICE OF
INFORMATION
AND TECHNOLOGY

Mobile Veteran-Facing Applications
Enterprise Design Pattern

*Mobile Veteran-facing Applications Design:
Determining Responsive Web and Mobile Native
Applications*

August 2018 | Demand Management Division

Table of Contents

Table 1: Change Matrix

Version	Date	Description of Updates
1.0	08/03/2018	Mobile Veteran-Facing Applications EDP Segment 1 document approved

1 Context

There is an improved user capability at the Department of Veterans Affairs (VA) that was developed from grouping Veteran services, enabling Veteran access to services from one interface; this practice has provided a model for planning Veteran access to Veteran-facing Mobile Native Applications or systems. As a first step, VA created Vets.gov, a web application used to replace more than 500 public-facing VA websites.

2 Problem

Currently, there is not clear guidance on the type of Veteran-facing application that should be developed. Mobile applications can be developed as responsive web applications and native applications, and each path offers different strengths and weaknesses.

3 Approach

To determine a new application development type, VA must establish mobile Veteran-facing application guidance for responsive web applications and native mobile application development.

3.1 Types of Applications

- Applications should first be developed as responsive web applications, as indicated in guidance developed by the VA Center for Innovation (VACI) for the VA Human Centered Design (HCD) Toolkit.[1] Responsive web design (RWD) is a web development approach that creates dynamic changes to the appearance of a website and depends on the screen size and orientation of the device being used to view it. Therefore, RWD enables the application to be viewed on both desktops and mobile devices.[2]
- Applications should *only* be developed as mobile native applications, applications built specifically for mobile devices,[3] if one or more of the following business/user requirements is true:
    - The application needs access to a device's native features that a responsive web application cannot access (e.g. camera and notifications).

---

[1] Source: October 2015 Version 1.0: VA Center for Innovation: Designing for Veterans: A Toolkit for Human-Centered Design. Additional information can be found in the *User Interaction Capabilities* EDP at https://www.oit.va.gov/library/programs/ts/edp/ea/UserInteractionCapabilities_V2.pdf.

[2] Responsive web applications can rapidly reach a large audience and are easier and more economical to develop. Additional information can be found in the *User Interaction Capabilities* EDP at https://www.oit.va.gov/library/programs/ts/edp/ea/UserInteractionCapabilities_V2.pdf.

[3] Native mobile applications provide fast performance and a high degree of reliability. Additional information can be found in the *User Interaction Capabilities* EDP at https://www.oit.va.gov/library/programs/ts/edp/ea/UserInteractionCapabilities_V2.pdf.

- o The application requires greater efficiency than a web application can provide.
  - o The application requires a greater level of security than a web application can provide.
  - o Only a native application can fulfill the business/user requirement.
- Develop native applications with the One-VA Technical Reference Model (TRM) approved device agnostic cross-platform development tools.
- Follow the Veteran-focused Integrated Process (VIP) for intake and Strategic Technology Alignment Team (STAT) compliance.

The following figure depicts how projects can determine whether to build a responsive web application or a native application.
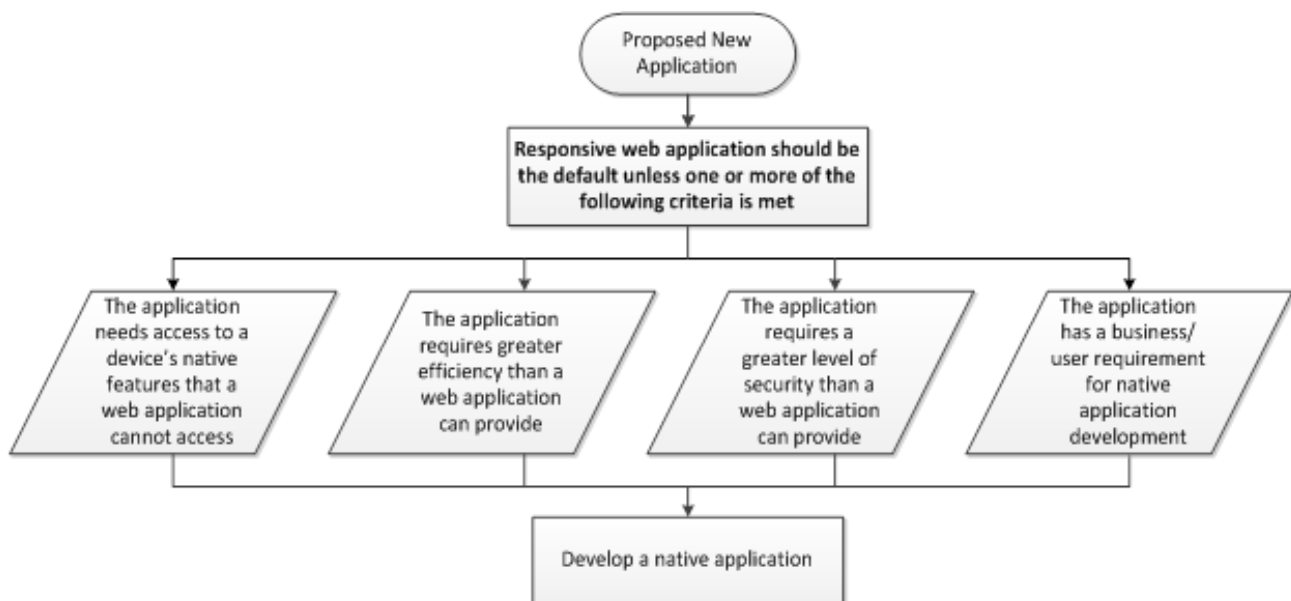

Figure 1: Web Application vs. Native Application Decision Tree

4 Application

The Design, Engineering, and Architecture (DEA) User Stories have a standard for VistA Integration Control Registrations (ICR), software source code scans, and conceptual and detailed system design models. Project teams using Veteran-focused Integration Process (VIP), or developing Veteran-facing applications, must comply with the approved standards in the TRM;[4] and map to the DEA User Stories below. Future changes in the standard will be reflected in the TRM; and in pertinent DEA User Stories.

---

[4] Reference the One-VA TRM on the VA internal network at http://trm.oit.va.gov/.

Table 2: DEA User Stories

DEA User Story	Title	User Story Text
DEA 04.11.01	Common Look and Feel	Application User Interfaces (UIs) shall follow the enterprise common UI templates and style guidelines.
DEA 04.14.01	COTS Products	All Commercial-off-the-Shelf (COTS) products used in the solution shall be from mature companies, large enough to support those products over the expected life of the product at all locations at which they may be installed.
DEA 04.14.02	Open Source	Open Source Software (OSS) shall be thoroughly evaluated when VA acquires software; and OSS development practices shall be considered when VA develops software.
DEA 04.14.03	One-VA Technical Reference Model (TRM)	All technologies and standards, and their respective versions used by the solution, shall be listed and identified as permissible for usage in the VA Technical Reference Model (TRM); or have appropriate waivers issued by the Strategic Technology Alignment Team (STAT) Governance Council (GC).
DEA 04.19.01	Thin Client	Solution should be designed for a browser or thin client based user interface, where possible.
DEA 04.25.01	Health Portfolio Product Registration	All software build components and software engineering artifacts within the VA health products portfolio must be registered with the Enterprise Program Management Office (EPMO) Health Products DBA and will be assigned proper acronyms, name-spaced with data files, and number-spaced according to the Office of Information and Technology (OIT) Health Product Administration package addressing standards.

Future updates of this document will reflect updates to the DEA compliance criteria to reflect the guiding principles for Veteran-facing applications. Compliance with these standards apply to the following major project scenarios:

- All new development efforts leveraging the VA Enterprise Cloud (VAEC)

5 Impacts

If Mobile Veteran-facing Application Standards are not implemented, the following have the potential to impact product delivery:

- Redundancy in application service
- Inconsistent user experience from Veteran-facing mobile applications

Appendix: References

References:

- Vets.gov: https://www.vets.gov
- VASI: http://vaausappdar401.aac.dva.va.gov/views/VAEATargetPortfolios/VATargetPortfolioDashboard?:iid=1&:isGuestRedirectFromVizportal=y&:embed=y
- VA Digital Modernization Strategy, April 11, 2018: http://vaww.ea.oit.va.gov/wp-content/uploads/2018/08/DigitalModernizationStrategy_080118.pdf
- VA DEA Assessment Guidance: https://vaww.portal2.va.gov/sites/asd/AERB/DEA_Assessment/DEA%20User%20Story%20Alignment/Home.aspx
- VA Directive 6551: https://www.va.gov/vapubs/viewPublication.asp?Pub_ID=829&FType=2

Disclaimer: This document serves both internal and external customers. Links displayed throughout this document may not be viewable to all users outside the VA domain. This document may also include links to websites outside VA control and jurisdiction. VA is not responsible for the privacy practices or the content of non-VA websites. We encourage you to review the privacy policy or terms and conditions of those sites to fully understand what information is collected and how it is used.

Statement of Endorsement: Reference herein to any specific commercial products, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government, and shall not be used for advertising or product endorsement purposes.