

**Pocket Card Mobile Application  
New Service Request #20131210  
Business Requirements Document**



**March 2014**

## Revision History

**NOTE:** *The revision history cycle begins once changes or enhancements are requested after the initial Business Requirements Document has been completed.*

Date	Description	Author
12/16/2013	Initial version. This document is versioned in the Clear Case tool.	[REDACTED]
Date BRD submitted to Business Owner(s) and Health Enterprise Systems Manager for sign-off	Approved version	[REDACTED] [REDACTED]

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# Business Requirements Document

## 1. Purpose

The Business Requirements Document (BRD) is authored by the business community for the purpose of capturing and describing the business needs of the customer/business owner within the New Service Request (NSR) [#20131210](#). The BRD provides insight into the AS IS and TO BE business area, identifying stakeholders and profiling primary and secondary user communities. It identifies what capabilities the stakeholders and the target users need and why these needs exist, providing a focused overview of the request requirements, constraints, and Information Technology (IT) options considered. This document does not state the development methodology.

## 2. Overview


The Office of Academic Affiliations (OAA) and Web and Mobile Solutions (WMS) request the development of a Pocket Card mobile application. Currently, many Department of Veterans Affairs (VA) staff members carry printed “pocket cards” with them as they work. Staff members use these pocket cards as quick reference tools for information that they need to access frequently and easily. A variety of programs, offices, and facilities publish pocket cards; however the cost to develop, print, and distribute these cards could be greatly reduced and in some cases eliminated with the development of an application that enables VA staff to view pocket card content on mobile devices.

The Pocket Card mobile application will be a new, standalone application enabling users to view pocket card content and download content to their mobile devices. Many pocket cards, for example OAA’s Resident Supervision pocket card, are printed and distributed every year; however yearly edits are generally minor and do not require major formatting changes or rewrites. Therefore, it would be much more efficient and cost-effective to provide an application that would allow VA administrators to make minor changes to pocket card whenever required via electronic means, eliminating the need for costly printing and distribution of revised pocket cards.

Additionally, users of pocket cards will benefit as they will be able to access the most up-to-date pocket cards on a single device instead of carrying printed copies of various pocket cards with them. Readers will no longer have to replace lost, damaged, or worn out pocket cards. Readers will also be able electronically to search for content within pocket cards, access additional information via HyperText Markup Language (HTML) links, and place phone calls using telecommunication-enabled devices. Eventually, the user base of the application could expand to members of the general public, including Veterans who may be interested in certain pocket card content.

There are no laws, policies, or other external forces mandating completion and deployment of this application within a specific time frame. Project stakeholders envision that once the Pocket Card mobile application is deployed, VA offices will continue to print pocket cards for those staff members who do not have access to the mobile application. After a transition period, printing of pocket cards could be completely eliminated, representing a major reduction in printing and distribution costs.

## 3. Customer and Primary Stakeholders

 Acting Chief Officer Academic Affiliations representing the Veteran Health Administration’s (VHA) Office of Academic Affiliations, is the primary stakeholder for this request. Review [Appendix D](#) for the complete list of primary and secondary stakeholders.

#### 4. Scope

To provide value to users, the application must provide two primary functions: the ability for VA administrators to create pocket cards within the application, and the ability for VA staff members, and potentially the general public, to download the pocket card content as a native application on a mobile device and then view the pocket card information. Content owners and administrators will be able to edit, delete, and otherwise manage pocket cards and pocket card content without relying on application developers and programmers to make simple text edits and changes. End-users will access pocket cards and, once downloaded, view pocket cards in an offline mode, as many VA facilities have wireless internet networks that are not easily accessed in every part of the facility.

Pocket card content will primarily consist of text including instructions, policies, procedures, contact information, and hyperlinks to other resources. The application will also support the inclusion of logos and other images as needed. As a lower priority, the application may include the ability to support audio and video content. Multimedia content may be especially important for any pocket cards that are available to Veterans and other members of the general public.

The application will not support user-entered data, either in the form of custom user-created content or user-entered notes; there are other applications and systems that provide those functionalities. Excluding user-created content from the Pocket Card application eliminates the risk that users may enter sensitive information (such as a Veteran's Personally Identifiable Information) into the application.

#### 5. Goals, Objectives and Outcome Measures

Goal/Objective and Desired Outcome	Impact	Measurement
Eliminate the need for VA programs, offices, and facilities to print and distribute pocket cards.	<ul style="list-style-type: none"><li>• Reduced pocket card printing costs</li><li>• Reduced pocket card distribution costs</li><li>• Most up to date content always available within application as the need to await printing and distribution is eliminated</li></ul>	<ul style="list-style-type: none"><li>• VA-wide pocket card printing costs are reduced by 90% within 3 years of the application's nation-wide deployment</li><li>• VA-wide pocket card distribution costs are reduced by 90% within 3 years of the application's nation-wide deployment</li></ul>
Provide the ability for pocket card readers to access the most up to date pocket card content from a single, centralized mobile application.	<ul style="list-style-type: none"><li>• Better informed pocket card consumers with faster, easier access to pocket cards compared to pocket card hard copies</li></ul>	<ul style="list-style-type: none"><li>• 95% or more of pocket card readers say they are "Satisfied" or "Extremely Satisfied" with the application in user satisfaction surveys</li><li>• 100% of users with VA-compatible mobile devices can access the application</li><li>• 100% of users can access desired information faster using the application vs. printed pocket cards</li></ul>

#### 6. Enterprise Need/Justification

The proposed enhancements and national deployment of the Pocket Card Mobile Application supports the VA's Fiscal Year (FY)2011-2015 Strategic Plan integrated objective to build the internal

capacity to serve Veterans efficiently and effectively through the creation of a Department-wide capability to make data-driven decisions. It also supports VA's Excellence in the 21st Century approach to healthcare by implementing tools that enforce a data-driven approach for ongoing tracking, monitoring, and measurement of patient performance, that allow for the continuous analysis and design of treatment.

## 7. Flow Diagrams/Process Models

See [Appendix B](#) for all process models associated with this application.

## 8. Requirements

### 8.1. Primary and Secondary Users

Type of User	Description	Responsibilities
Primary User: VA Staff Pocket Card Users	VA employees including clinical and non-clinical staff	<ul style="list-style-type: none"> <li>Download pocket card applications on their mobile device(s)</li> <li>Update applications upon notification of update availability</li> <li>View pocket card content</li> <li>Provide feedback on content or usability to pocket card administrators</li> </ul>
Primary User: General Public	Veterans and their family members, Veteran caregivers' non-VA clinicians and medical staff, any other interested parties. <b>Note:</b> Public access to pocket card content is not the main focus of this application, and may be more appropriate for a 2 <sup>nd</sup> phase of development.	<ul style="list-style-type: none"> <li>Download pocket card applications on their mobile device(s)</li> <li>Update applications upon notification of update availability</li> <li>View pocket card content</li> </ul>
Primary User: Pocket Card Content Owners / Administrators	VA employees designated by program offices or facilities to create, edit, and otherwise manage pocket cards and pocket card content.	<ul style="list-style-type: none"> <li>Create pocket card content</li> <li>Release pocket cards for publication</li> <li>Edit existing pocket cards</li> <li>Manage pocket card change control processes</li> <li>Manage pocket card reader access</li> </ul>
Secondary User: System Administrators	VA facility staff who serve as primary resources overseeing technical and functional operation of IT resources	<ul style="list-style-type: none"> <li>Maintain upkeep, configuration, and reliable operation of the application(s) as needed</li> <li>Ensure that all application templates meet federal information security and privacy requirements, Section 508 requirements, any emergent technical or legal requirements, and VA branding look-and-feel requirements</li> </ul>

**Note:** Creation, editing, and management of pocket cards will be guided by a set of policies and procedures to be defined in documents beyond the scope of this BRD. Pocket Card Content Owners / Administrators and System Administrators may have different levels of access to functionality depending on the details of these policies. For example, a pocket card that may impact patient care could require a review from a Patient Safety administrator before publication. See [Appendix B](#) for example process flows.

## 8.2. Epics/User Stories

These User Stories describe all the functionality of the system for the first phase of the Pocket Card Mobile Application project. Agile projects use a product backlog which is a prioritized list of the functionality to be developed in a product or service. Although product backlog items can be whatever the team desires, user stories have emerged as the best and most popular form of product backlog item.

While a product backlog can be thought of as a replacement for the requirements document of a traditional project, it is important to remember that the written part of a user story (“As a user, I want...”) is incomplete until the discussions about that story occur. It is often best to think of the written part as a pointer to the real requirement. **User Stories are your Product Backlog.**

The epics and user stories for this work effort are documented in a Requirements Traceability Matrix (RTM). The RTM is located in the New Service Request Database:



## 8.3. Non-Functional Requirements

- Enable the mobile application(s) to operate successfully within a wide spectrum of operating conditions, such as a range of supported screen resolutions and form factors, network bandwidth situations and network types (Second Generation (2G), Third Generation (3G), Wi-Fi), etc.
- Enable the Mobile application(s) to interact with the device's sensors such as Global Positioning System (GPS), accelerometer, the ambient light sensor, camera, etc. The application must respect the sensor's operating characteristics such as its operating range, sensitivity, accuracy, maximum polling interval, etc.
- Ensure all network-enabled features in the mobile application are either network fault tolerant or degrade gracefully when the channel over which it is operating becomes unavailable or the signal strength reduces.
- Ensure a seamless transition to a new channel or a graceful degradation or failure when the mobile device transitions from one channel to another.
- Provide support for multiple channels. (ex.: the application will always prefer the Wi-Fi channel over all others)
- Enable the mobile applications to adjust accordingly for different screen resolutions (font adjustment, layout, background image)
- Ensure that touch is enabled for all features in the application when the application is operating in touch screen mode. This should include user ability to swipe up or down or left to right to move from screen to screen when appropriate, pan, and zoom.
- Ensure that displays and layouts adjust to the device's orientation (landscape or portrait) for all capable devices.
- Ensure that all applications can be downloaded locally onto mobile device(s) so that a live connection to a network (2G, 3G, Wi-Fi, etc.) is not required for the user to access the content of the app.

ReqPro Tag	Non-Functional Requirements (NONF) Category
	<i>(Note: Each system developed by VA OIT <u>must</u> comply with the following mandatory System Performance Requirements. This excludes class III software.)</i>

	<b>System Performance Reporting Requirements</b>
NONF2811	Include instrumentation to measure all performance metrics specified in the Non-Functional Requirements section of the BRD. At a minimum, systems will have the ability to measure reporting requirements for Responsiveness, Capacity, and Availability as defined in the non-functional requirements section of this document.
NONF2812	Make the performance measurements available to the IT Performance Dashboard to enable display of “actual” system metrics to customers and IT staff.
	<b>Operational Environment Requirements</b>
	Applications must be capable of being deployed via the VA Enterprise App Store.
	The system shall respond to user actions in 10 seconds or less in 80% of the attempts, and never more than 20 seconds.
	Maintenance, including maintenance of externally developed software incorporated into the mobile application(s), shall be scheduled during off peak hours or in conjunction with relevant VistA maintenance schedules.
NONF1608	Mobile applications shall be capable of being rendered on multiple platforms, including smart phones, tablets and computer workstations.
	<b>Documentation Requirements</b>
NONF1612	A technical training curriculum shall be developed and delivered to all levels of staff users in the form of a user guide.
	The user guide must provide accurate views of the mobile application with descriptions of user interface components.
	The training curriculum shall state the expected training time for primary users and secondary users to become productive at using the mobile application.
	All training curricula, user manuals and other training tools shall be updated by the application developer under the supervision of OAA and Web and Mobile Solutions (WMS) and delivered to all levels of users. The curricula shall include all aspects of the mobile application(s) and all changes to processes and procedures.
NONF1613	The training curriculum shall state the expected task completion time for primary and secondary users.
NONF2228	Updates shall be made, as necessary, to applicable user manuals and other training tools and shall be delivered to all levels of users. If no user documentation exists, it shall be produced.
	Updates shall be made, as necessary, to the applicable technical documentation including Operations and Maintenance (OM) Plans related to the application(s) located on the VA Software Documentation Library. If no User or OM documentation exists, it shall be produced.
	<b>Implementation Requirements</b>
	An implementation plan shall be developed for all aspects of the mobile application.
	Technical Help Desk support for the application shall be provided for users to obtain assistance with mobile application.
NONF1614	The IT solution shall be designed to comply with the applicable approved Enterprise Service Level Agreements (SLA).
	Mobile devices must have network safeguards, such as Mobile Device Management (MDM) policies and Virtual Private Network (VPN) capabilities, applied before they are allowed to interface to the VA network whenever attempting to download or update content.
	Applications must undergo a review and vulnerability scanning in order to be given the Authority to Operate (ATO). The ATO must be provided to the Certification Program



	Office in OIT.
	<b>Data Quality/Assurance Requirements</b>
NONF2229	A monitoring process shall be provided to ensure that data is accurate and up-to-date and provides accurate alerts for malfunctions while minimizing false alarms.
	<b>User Access/Security Requirements</b>
	Applications must meet VA's mobile guidelines in place at the time of the development/deployment.
NONF1616	Due to patient safety considerations, data protection measures such as backup intervals and/or redundancy shall be consistent with systems categorized as critical.
NONF1617	Ensure the proposed solution meets all VHA Security, Privacy and Identity Management requirements including <a href="#">VA Handbook 6500</a> . (See Enterprise Requirements Appendix).

The table below defines the different levels of user access to the Pocket Card Mobile Application.

Name	Description	Pocket Card Mobile Application Access
Primary Users	VA Staff Pocket Card Users	Read pocket card content
	Veterans and General Public	Read pocket card content
	Pocket Card Content Owners / Administrators	<ul style="list-style-type: none"> <li>Read pocket card content</li> <li>Write / create pocket card content</li> <li>Publish pocket card content</li> <li>Modify existing pocket card content</li> </ul>
Secondary Users	System Administrators	Access level necessary to maintain upkeep, configuration, and reliable operation of the application as needed

### 8.3.1. Performance, Capacity, and Availability Requirements

#### 8.3.1.1. Performance

<b>If this is a system modification, how many users does the current system support?</b>
This is a new application, not a system modification.
<b>How many users will the new system (or system modification) support?</b>
The number of users will depend heavily on the type of pocket cards available, and the size of the intended audience for each pocket card. For example, the number of users for a mobile Resident Supervision pocket card will range from 60,000 to 70,000 total users. The number of users for a mobile pocket card available to all VA staff could support as many as 239,000+ users. A pocket card that is accessible to the general public, including Veterans, Veteran families, Department of Defense staff, and non-VHA medical providers could feasibly draw several million users.
<b>What is the predicted annual growth in the number of system users?</b>
The annual user growth will depend heavily on the type of pocket cards available, the size of the intended audience for each pocket card, and the rate of adoption among VA versus non-VA users. The number of users for a mobile Resident Supervision pocket card could grow as much as 5,000 to 6,000 users annually. Growth in VA-staff users and general public users will depend greatly on VA communication of the application's availability and the rate of

adoption among these users.
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#### 8.3.1.2. Capacity

<b>What is the predicted size (average) of a typical business transaction?</b>
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The predicted average size of a typical business transaction is 1 Kilobyte (KB) to 3 KB. The size of a 5-minute video tutorial will be approximately 9MB. Capacity required for video streaming will vary greatly depending on the amount of video content available and the video's picture and audio quality. It is expected that users will access videos approximately once per week; field testing of the application will produce better estimates.
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<b>What is the predicted number of transactions per hour (day, or other time period)?</b>
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It is anticipated that the average user will access the application one or two times per week. Users new to VA, such as medical residents, will likely access the application much more frequently – likely several times per day at first, but gradually reducing over time.
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<b>Is the transaction profile expected to change (grow) over time?</b>
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If videos and high resolution images become more numerous within pocket card content, the size of the typical transaction profile will grow considerably. Video content is considered a lower-priority application feature compared to text and images. The majority of VA-published pocket cards today mostly feature text and simple logos.
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<b>What are the dependencies, interactions, and interfaces with other systems?</b>
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The Pocket Card mobile application may feature content that links to other pocket card content, to other VA mobile applications, or to resources on the VA-intranet or the World Wide Web. Otherwise, project participants have not identified any other dependencies, interactions, or interfaces at this time.
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<b>What is the process for planning/adjusting capacity?</b>
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Capacity planning and adjusting load requirements will be a collaborative process between the project team and Enterprise Systems Engineering (ESE). The project manager will be responsible for submitting an Application Self-Scoring Evaluation Support System (ASSESS) form to the ESE Capacity Planning and Engineering (CPE) group during the planning phase of the project. The ASSESS form provides a comprehensive estimate of the potential impact of the application on enterprise system capacity and resources. Upon receipt, the ESE CPE group will assign an analyst to review the form and publish it to their document repository.
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Once the application is ready for release to Initial Operating Capability (IOC), an ESE CPE analyst will review and validate additional project artifacts detailing the capacity requirements for the application to ensure the original load estimates fall within accepted fault tolerances. Changes will be discussed between the project team and ESE CPE to ensure the application does not negatively affect enterprise system capacity upon release.
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Upon release to production, adjustments to the capacity will be performed by Enterprise Operations Capacity Management staff. Operations Capacity Management staff will be informed of the baseline estimates for capacity provided in the ASSESS form and monitor the application, database, hardware, and network performance and adjust capacity as required.
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<b>Does the update require a surge capacity that would be different from the base application?</b>
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The application will require surge capacity if / when a new pocket card is made available to a new user population. For example, the first pocket card to be made available to Veterans and then to the general public may see a surge of users in the thousands or millions. Deployment planning for this application should take into consideration a phased approach for deployment, especially for any pocket card that widens the audience scope beyond the
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primary base of VA-staff.
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#### 8.3.1.3. Availability

<b>Describe when the envisioned system will need to be available (business hours only, weekends, holidays, etc) to support the business.</b>
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Users will access the application at any time of day and during all days, including weekends and holidays. The application will require 99.9% uptime and accessibility for users.
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#### 8.3.2. Usability Requirements

User Experience encompasses the entire interaction between the user and the system. This includes direct interaction with the system as well as other interactions, understanding, awareness, perceptions, beliefs, feelings, and actions that result from that interaction. One key component of the user experience is the usability of the system. The International Organization for Standardization (ISO) defines usability as “the extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency, and satisfaction in a specified context of use” (1998).

In order for the Pocket Card Mobile Application to achieve a good user experience for users who interact with it, the system must meet the requirements outlined in this section. These involve attributes of the application as well as the process that is required to achieve them.

In order to improve usability of VA-developed or purchased applications, the following actions are required:

- In accordance with the Office of the National Coordinator for Health Information Technology’s (ONC) Meaningful Use (MU) Stage 2 final ruling, employ an industry recognized User Centered Design (UCD) process. The methods for UCD are well defined in documents and requirements such as ISO 9241–11, ISO 13407, ISO 16982, National Institute of Standards and Technology Interagency Report (NISTIR) 7741, ISO/International Electrochemical Commission (IEC) 62366, and ISO 9241-210. Developers will choose their UCD approach; one or more specific UCD processes will not be prescribed.
- Adhere to an industry recognized User Interface (UI) Best Practices Guideline or Style Guide. For example, first follow UI guidelines for the development platform. In instances where platform guidelines are not available, adhere to the VA’s Best Practices Guidelines/Style Guide.
- Inform requirements and designs with detailed human factors work products that have been completed will be completed for the specific project. Examples of specific human factors activities might include heuristic evaluations, site visits, interviews, application-specific design guides, and usability testing on existing systems or prototypes.

A sound UCD and development process based on human factors should include the following activities:

- Understanding of the users, the users’ tasks, and the users’ environments;
- Review of similar or competitive systems to inform requirements and design;
- Heuristic evaluation of prior versions, prototypes, or baseline applications, if applicable;
- Iterative design and formative usability testing (Formative usability testing is used to discover usability problems during the design and development process);

- User risk analysis; and
- Summative validation usability testing (Summative usability testing is used to quantify and validate usability of a product with measures of effectiveness, efficiency, user perceptions, etc.).

To demonstrate high usability, the application should be/have:

- Intuitive and easy to learn with minimal training;
- Effective by allowing users to successfully complete tasks;
- Efficient by allowing users to complete their work in a manner consistent with clinical practice and workflow;
- Have high perceived usability as demonstrated by appropriate survey measures; and
- Designed to aid users in meeting task goals without being an additional burden.

The system must be reliable and enable user trust by providing:

- Stable and reliable performance;
- Accurate data;
- Display of all data that is available in native or interfaced systems and intended to be available in the application; and
- Accessible information related to the source of data.

The application should include a modern graphical user interface that allows the user to view data from multiple sources and include:

- Integrated display of structured and unstructured data;
- Rich data visualization and graphical display of data;
- Ability to switch between tabular and graphical data views;
- Ability to interact with displayed data to obtain additional details related to the data and source of the data; and
- User customizable components and settings.

The application must provide for advanced and up-to-date searching to include:

- Fast Google-like Lucene search functionality with auto-complete and real-time display of matched results during typing; and
- Search history.

The application must provide for advanced filtering capabilities to include:

- Filtering of data tables, lists, and grids; and
- Filtering of search results.

The application design should be modified to:

- Address the specific findings from a human factors heuristic evaluation conducted on the prior version of the application;
- Address the specific findings reported from field use of the prior version; and
- Address the specific findings reported from usability testing of the prior version or relevant prototypes.

The application design should be modified to address the following UI guidelines provided in the table below, as applicable.

ReqPro Tag	Usability/User Interface Requirements
NONF2661	Left align content in table cells to facilitate quick visual scan.
NONF2662	Left align text for column headers to facilitate visual scan and make columns and content appear more organized.
NONF2663	Use mixed case instead of all caps whenever possible (e.g., dropdown list items, table data, table headers, hyperlinks, tab names). Limit the use of “all caps” throughout the application.
NONF2664	Simplify button labels. Re-label buttons to reflect standard terminology that is common in web interfaces and other applications (e.g., “Cancel”). Emphasize the action being performed in the most succinct way possible. Minimize redundancy in text/terminology that is used to convey the same action.
NONF2665	Left align page/section titles to anchor titles in consistent locations regardless of window sizing.
NONF2666	Labels for fields should be left aligned to facilitate quick visual scan and make forms and field groupings appear more organized.
NONF2667	Avoid using acronyms or abbreviations unless (a) they are widely understood/well known or (b) there is very limited space to display the full meaning. This supports naïve user understanding. If limited space results in using a non-common acronym/abbreviation, ensure it is specified within “Help” and/or as a tooltip.
NONF2668	Use colors such as red and green only for status driven content, and DO NOT use colors as the only indicator of a feature on-screen. Avoid using red for text/content, links, button labels, etc. This will reduce risk for user error, improve link discoverability, and facilitate understanding of differences in navigation/actions/content. It will also help users to isolate important status information (using red, green, etc.) from other less important information when viewing and processing information provided to them on a page.
NONF2669	Provide visual separation between the navigation space and the main content area.
NONF2670	Add field level validation and notification of missing information on the same page without launching a new window or navigating to another page.
NONF2671	Make all text hyperlinks appear consistent in style.
NONF2672	Make drop-down selection box widths appropriate for content and visual appeal.
NONF2673	Use standard and always visible radio buttons for “Yes/No” options instead of requiring the user to click in a drop down box and then click to select the “Yes” or “No” option.
NONF2674	Use standard date and time selection widgets. Where date and time are selected/picked from a standard widget, also provide direct data entry to support keyboard navigation. Enable field level validation immediately upon entry. Include instructional format text within the field entry box.
NONF2675	Provide standard sort behavior and visual indications on columns in all tables.
NONF2676	Define and adhere to a standard model for use and design of controls, buttons, hyperlinks, and navigation elements.
NONF2677	Ensure that text is sized to be readable. For example, use the 007 Rule to assure text size is readable for users with 20/40 vision. The formula: Text height = .007 * distance between eyes and screen.
NONF2678	Place common navigation elements in consistent locations.
NONF2679	Place critical information “above the fold” (i.e., in the top portion of the screen that is immediately viewable).
NONF2680	Use consistent screen flow models, elements, and terms to support similar

	workflows.
NONF2681	Use consistently named buttons when actions are the same (e.g., Add vs. Save vs. Submit).
NONF2682	Enable users to print views from where they are in the interface. Avoid requiring the user to “run a report” in order to print something that is viewable on the screen.
NONF2683	Provide field entry tool tips at the field location. Ensure consistency across the application in field labels, formats, location of tooltips, and tool tip text.
NONF2684	Provide visual indication of required fields.
NONF2685	Display field labels in close proximity to entry elements.
NONF2686	Use consistent elements to filter data.
NONF2687	Use consistent elements to sort data.
NONF2688	Use a consistent model for display, layout, and grouping of data entry fields.
NONF2689	Provide alternate row shading in lengthy tables of data, form elements, etc.
NONF2690	Ensure that icons are recognized by users.
NONF2691	Provide some “white space” between status icons in report views, white board views, etc.
NONF2692	Auto-populate default values in entry/selection fields when possible and appropriate.
NONF2693	Visually differentiate status icons from clickable icons, when appropriate.
NONF2694	Define and support the appropriate user tab sequence through fields in forms in order to support keyboard navigation when entering data in forms.
NONF2695	Define and adhere to standard action button placement on screens, forms, etc.
NONF2696	Visually distinguish the primary action button on a page.
NONF2697	Consistently use screen elements, action elements, workflow sequences within/across screens, language, etc.
NONF2698	Provide error messages in user-centric language with specific instructions on the meaning of the error and how to recover from it. Use error messages and method of display consistently across the interface.
NONF2699	Provide context specific Help.
NONF2700	Do not use the term “sex” or any like abbreviations of that to represent gender.

#### 8.4. Known Interfaces

The Pocket Card mobile application may feature content that links to other pocket card content, to other VA mobile applications, or to resources on the VA-intranet or the World Wide Web. Otherwise, project participants have not identified any other dependencies, interactions, or interfaces at this time.

#### 8.5. Related Projects or Work Efforts

##### VistA Evolution

[\[Redacted\]](#)

The VistA Evolution program aims to enhance VA’s current EHR to allow interoperability with the Department of Defense’s EHR and to provide a more robust set of clinical capabilities.

## **9. Other Considerations**

### **9.1. Alternatives**

The primary alternative to this request is to maintain the current process of printing and distributing pocket cards at the local and national levels within VA. The major strengths of this option are that it will not require further resources and money to be spent on development of the application. The major weaknesses of this option are the continued costs to VA to edit and update pocket card content, print pocket cards, and distribute pocket cards.

In addition, the stakeholders for this effort envision the majority of pocket card content to be publically available information. There is the possibility that a non-VA party (such as a non-profit organization or enterprising individual) could easily develop a pocket card application with existing VA content found on publically accessible websites and other resources. This alternative, however, would require a party outside of the control of VA to initiate and execute this project, and VA would have little or no influence over the application once released.

### **9.2. Assumptions**

It is assumed that when this BRD is used to guide development activities, the development team will adhere to the technical requirements outlined by the OneVA Enterprise Architecture (EA) Enterprise Technical Architecture (ETA). In addition to a technical architecture that will guide the development of the application, it is also assumed that OIT will accept a mobile operating system and hardware platform that will be provided in the ETA. It is assumed that there will be a Mobile Governance board that will manage the integration of the mobile applications, approve the architecture of the mobile applications, and determine how those mobile applications interact within the VA Technical infrastructure.

When possible, Requirements Design and Management (RDM) will incorporate known or expected needs for integrated with VistA Evolution (VE) and Solution Oriented Architecture (SOA) environment in the BRD. RDM will also share VE Program Executive Office (PEO) Contact Information with hand off of the BRD to ensure WMS Project Manager and development staff have access to VE PEO.

### **9.3. Dependencies**

The Pocket Card mobile application may feature content that links to resources on the VA-intranet or the public World Wide Web. Otherwise, project stakeholders have not identified any other dependencies, interactions, or interfaces at this time.

### **9.4. Constraints**

Because pocket card content may have impact on patient care and clinical decision making, the application must adhere to standards set by VHA's office of Informatics Patient Safety. In addition, the application's design must adhere to the UCD principles described in this BRD and other external mandates such as Section 508 Compliance. Lastly, the VE PEO shall be included in this mobile application effort to discuss plans for VistA Modernization.

## 9.5. Business Risks and Mitigation

**Business Risk:** If the pocket cards are not easy to access and read, users may prefer to continue to use hard copies of pocket cards.

**Mitigation:** Adhere to the usability and non-functional requirements described in this document as well as industry best practices for effective, user-centric UI design patterns.

**Business Risk:** If the pocket card content is not accurate, relevant, and up to date, users may be deterred from using the application. Inaccurate content could also negatively impact patient care, data quality in VA systems including the Electronic Health Record (EHR), and employee safety.

**Mitigation:** Ensure that when the application is deployed, content and system owners are provided policies and procedures describing how to develop content and perform quality assurance checks on the content periodically. Ensure that the application also includes contact information so that users can provide feedback to content owners. VA will also need to be able to notify users if /when the application is no longer supported or valid and should be deleted from users' devices.



## Appendix A. References

OAA Resident Supervision Pocket Card

[http://www.va.gov/oaa/resources\\_resident\\_supervision.asp](http://www.va.gov/oaa/resources_resident_supervision.asp)

OIT Master Glossary

[REDACTED]

OneVA EA

<http://www.ea.oit.va.gov/>

OneVA EA ETA, August 2012

[http://www.ea.oit.va.gov/EAOIT/docs/ETAComplianceFINAL\\_12\\_8\\_28.pdf](http://www.ea.oit.va.gov/EAOIT/docs/ETAComplianceFINAL_12_8_28.pdf)

VA Directive 6221 Accessible Electronic and Information Technology, Directive/Handbook

[http://www.section508.va.gov/docs/Directive\\_6221.pdf](http://www.section508.va.gov/docs/Directive_6221.pdf)

VA Handbook 6500 – Information Security Program

[REDACTED]

VA Mobile Framework User Interface Checklist

[REDACTED]

VA Software Document Library (VDL)

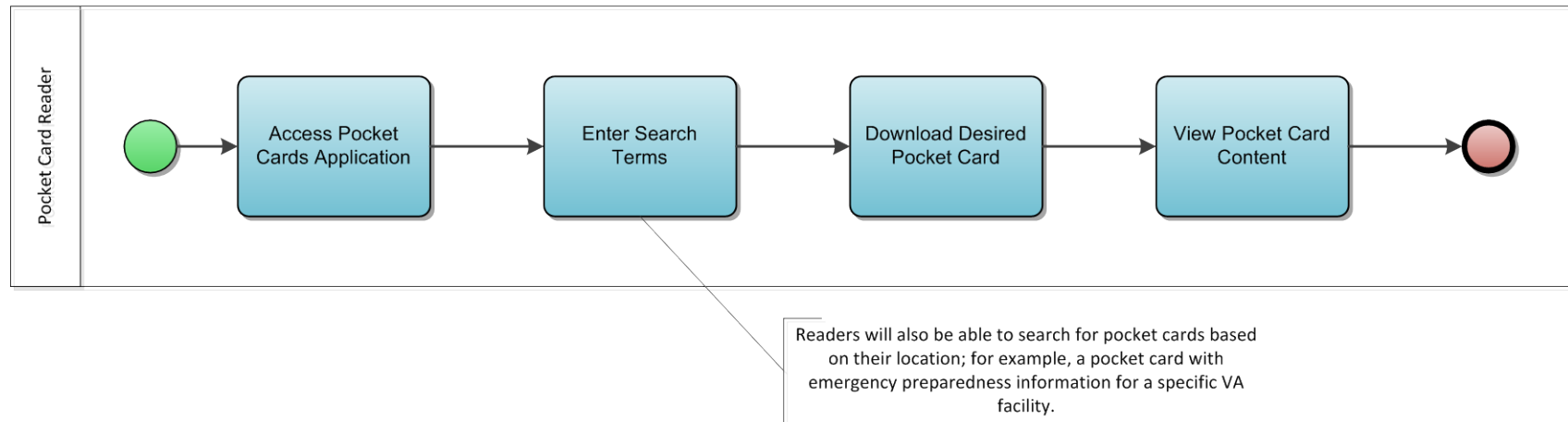
[REDACTED]

VA's Strategic Plan Refresh FY2011–2015

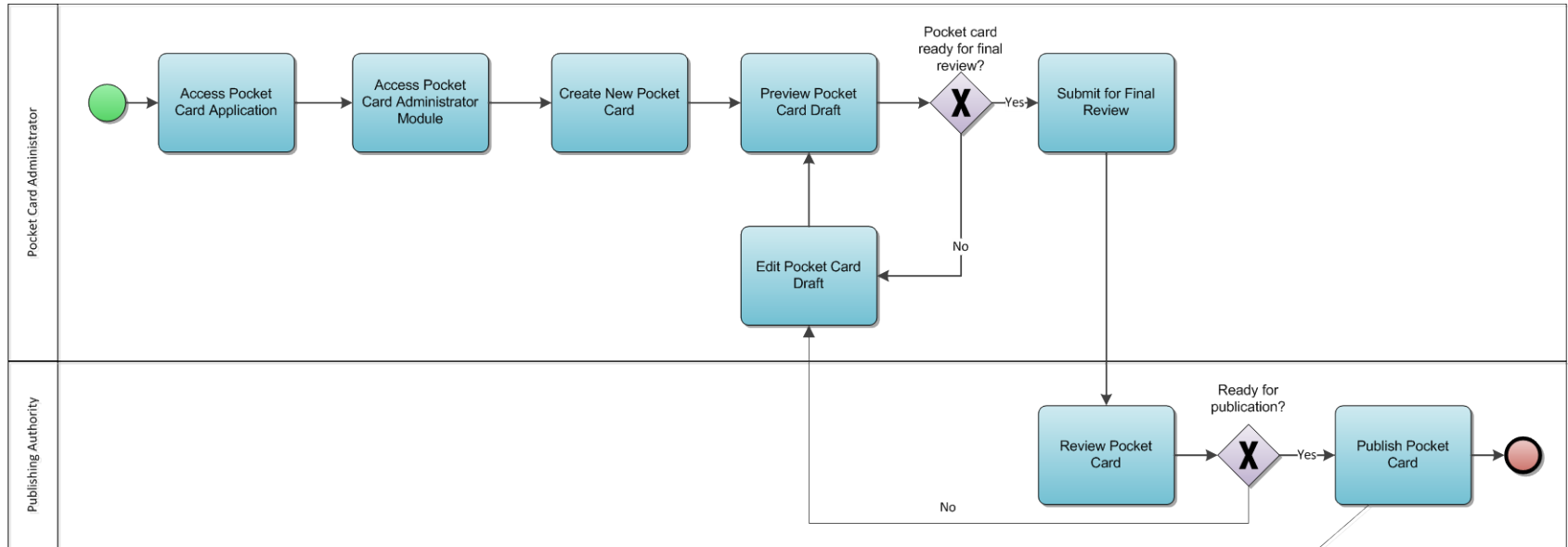
[http://www.va.gov/VA\\_2011-2015\\_Strategic\\_Plan\\_Refresh\\_wv.pdf](http://www.va.gov/VA_2011-2015_Strategic_Plan_Refresh_wv.pdf)

## Appendix B. Models

Business Process (BP) 1: Pocket Card Search, Download, and View

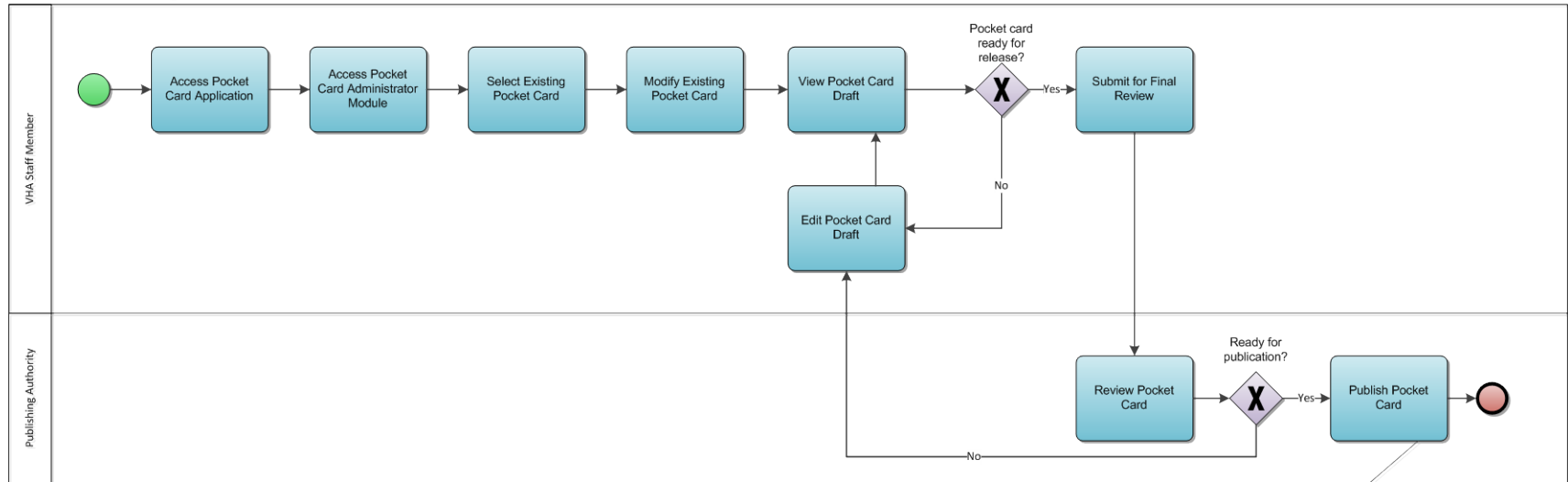


## BP2: Create New Pocket Card



Creation, editing, and management of pocket cards will be guided by a set of policies and procedures to be defined in documents beyond the scope of this BRD. These policies and procedures are represented here as a "Publishing Authority" swimlane.

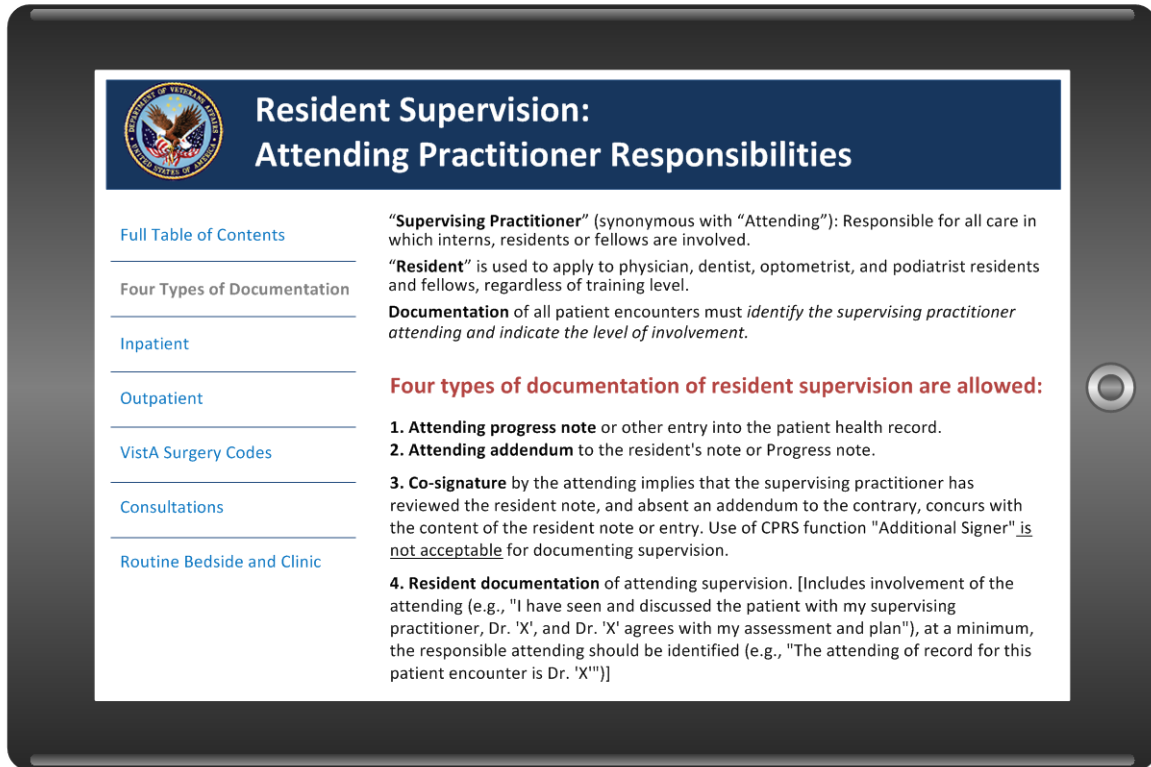
### BP3: Edit Existing Pocket Card



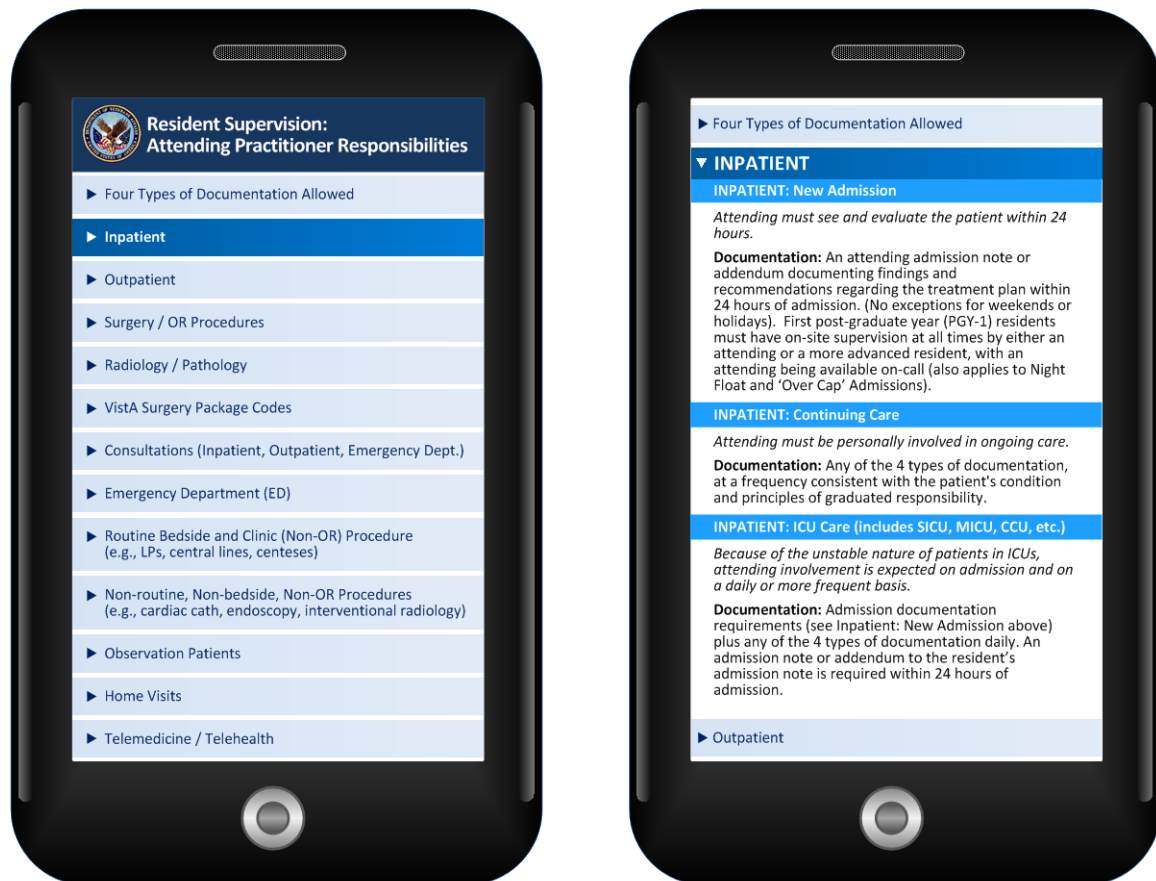
Creation, editing, and management of pocket cards will be guided by a set of policies and procedures to be defined in documents beyond the scope of this BRD. These policies and procedures are represented here as a "Publishing Authority" swimlane.

## Appendix C. Wireframes

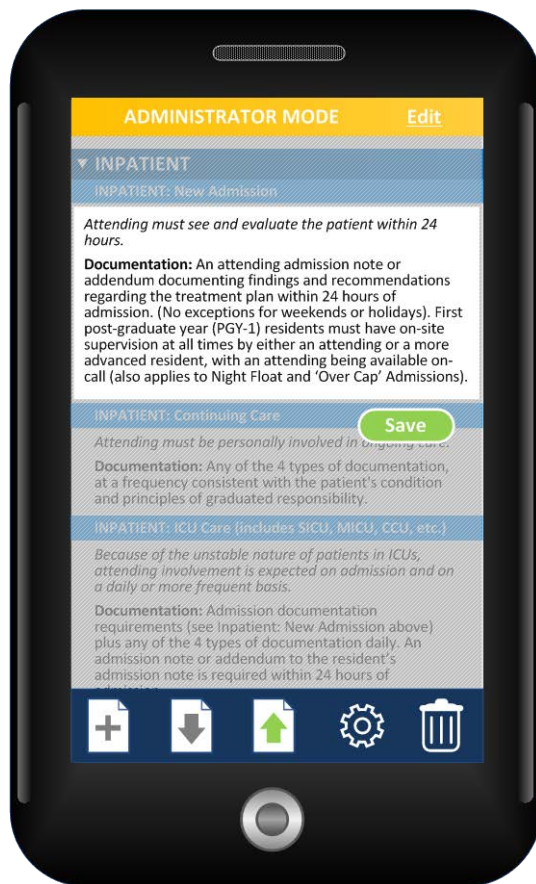
Wireframe (WF) 1a: View Pocket Card Content (Tablet Aspect Ratio)



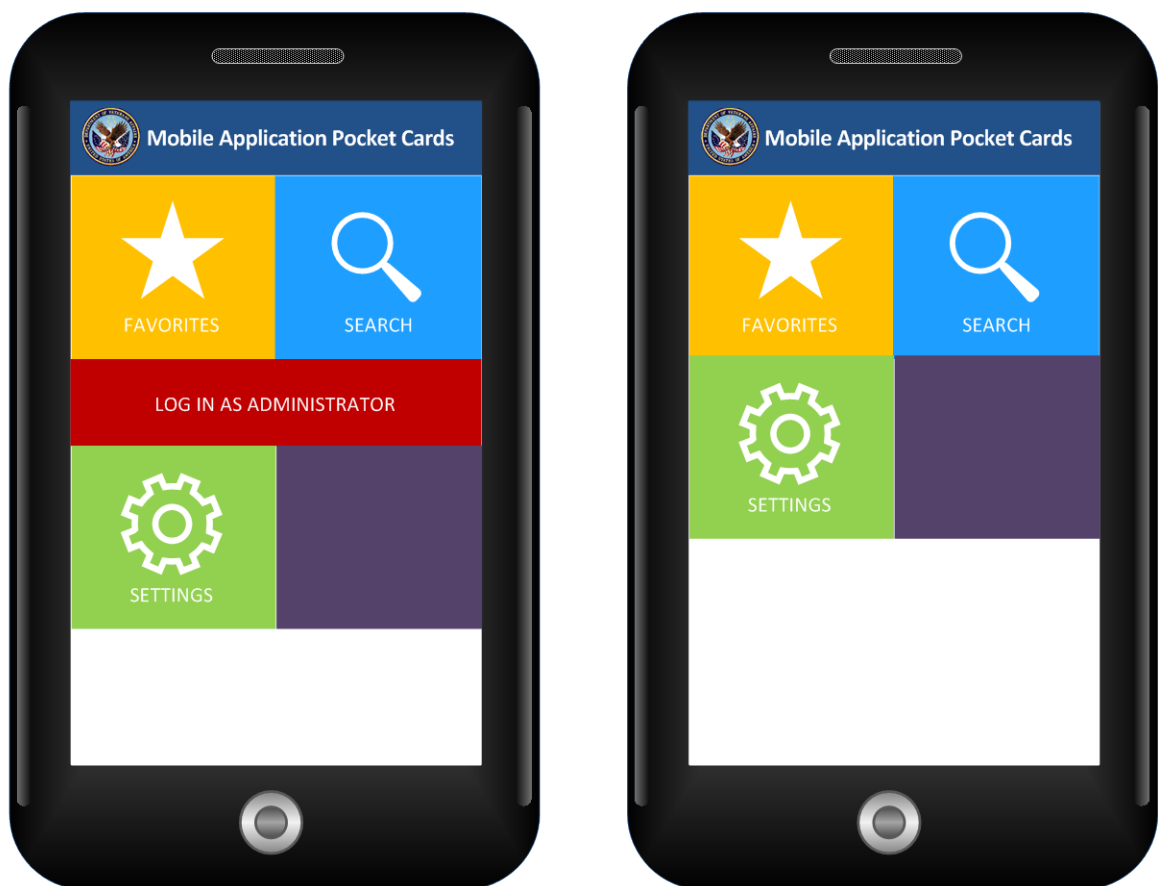
WF 1B: View Pocket Card Content (Phone Aspect Ratio)



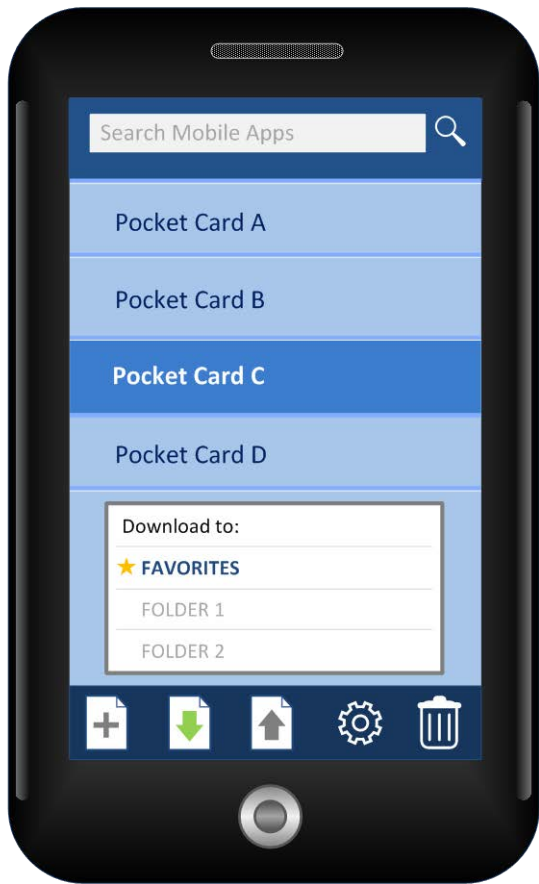
### WF 3: Administrator Features



WF4: Administrator and Reader Homepage

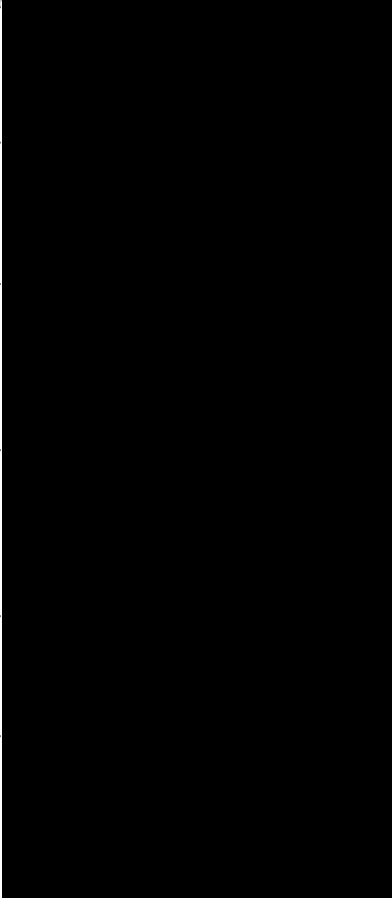







## Appendix D: Stakeholders, Primary/Secondary Users, and Workgroups

### Stakeholders

Type of Stakeholder	Description	Responsibilities
Requester		Submitted request. Submits business requirements. Monitors progress of request. Contributes to BRD development.
Endorser		Endorsed this request. Provides strategic direction to the program. Elicits executive support and funding. Monitors the progress and time lines.
Business Owner(s)/Program Office(s)		Provide final approval of BRD with sign-off authority. Provide strategic direction to the program. Elicits executive support and funding. Monitors the progress and time lines.
Business Subject Matter Expert(s) (SME)		Provide background on current system and processes. Describe features of current systems, including known problems. Identify features of enhancement.
Technical SME(s)		Provide technical background information about the current software and requested enhancements.
User SME(s)		Ensure that the enhancements will account for current business processes and existing software capabilities.

### Stakeholder Support Team (BRD Development)

Type of Stakeholder	Description	Responsibilities
Security Requirements SME(s)		Responsible for determining the Certification and Accreditation (CA) and other security requirements for the request.



## Appendix E. Enterprise Requirements

Below is a subset of Enterprise-level Requirements that are of particular interest to the business community. These requirements **MUST** be addressed within each project resulting from this work effort. If OIT cannot address these Enterprise-level requirements, the Business Owners responsible for each area **MUST** be engaged in any waiver discussions prior to any decisions being made. This section is not meant to be a comprehensive list of all Enterprise-level requirements that may apply to this work effort and should not preclude the technical community from reviewing all Enterprise-level requirements, and identifying others that should apply to this work effort as well.

ReqPro Tag	Requirement Type	Description
ENTR101	Security	<p>All VA security requirements will be adhered to. Based on Federal Information Processing Standard (FIPS) 199 and National Institute of Standards and Technology (NIST) SP 800-60, recommended Security Categorization is Low.</p> <p>The Security Categorization will drive the initial set of minimal security controls required for the information system. Minimum security control requirements are addressed in NIST SP 800-53 and VA Handbook 6500, Appendix D.</p>
ENTR10	Privacy	All VA Privacy requirements will be adhered to. Efforts that involve the collection and maintenance of individually identifiable information must be covered by a Privacy Act system of records notice.
ENTR95	508 Compliance	<p>All Section 508 requirements will be adhered to. Compliance with Section 508 will be determined by fully meeting the applicable requirements as set forth in the VHA Section 508 checklists (1194.21, 1194.22, 1194.24, 1194.31 and 1194.41) located at: <a href="http://www.ehealth.va.gov/508/resources_508.html">http://www.ehealth.va.gov/508/resources_508.html</a> or as otherwise specified. Checkpoints will be established to ensure that accessibility is incorporated from the earliest possible design or acquisition phase and successfully implemented throughout the project.</p>
ENTR7	Executive Order	All executive order requirements will be adhered to.
ENTR8	Identity Management	All Enterprise Identity Management requirements will be adhered to. These requirements are applicable to any application that adds, updates, or performs lookups on persons.
ENTR104	Terminology Services	Application/Services shall use the VA Enterprise Terminology Services (VETS) as the authoritative source to access clinical reference terminology.
fNEED3273	Compatibility	All mobile applications shall be designed to be accessible and interact with VistA Evolution applications.

## Appendix F. Acronyms and Abbreviations

OIT Master Glossary:

Term	Definition
2G	Second Generation
3G	Third Generation
ASSESS	Application Self-Scoring Evaluation Support System
ATO	Authority to Operate
BP	Business Process
BRD	Business Requirements Document
CA	Certification and Accreditation
CCD	Continuity of Care Document
CPE	Capacity Planning and Engineering
EDES	Emergency Department Encounter Summary
EHR	Electronic Health Record
ESE	Enterprise Systems Engineering
ETA	Enterprise Technical Architecture
FIPS	Federal Information Processing Standard
FY	Fiscal Year
GPS	Global Positioning System
HITSP	Health Information Technology Standards Panel
HL7	Health Level Seven
HTML	HyperText Markup Language
IEC	International Electrochemical Commission
IHE	Integrating the Healthcare Enterprise
ISO	International Organization for Standardization
IOC	Initial Operating Capability
IT	Information Technology
KB	Kilobyte
LOINC	Logical Observation Identifiers, Names, and Codes
MB	Megabyte
MDM	Mobile Device Management
MU	Meaningful Use
NIST	National Institute of Standards and Technology
NISTIR	National Institute of Standards and Technology Interagency Report
NSR	New Service Request
NTRT	New Term Rapid Turnaround
OAA	Office of Academic Affiliations

Term	Definition
OIT	Office of Information and Technology
OM	Operations and Maintenance
ONC	Office of the National Coordinator for Health Information Technology
OWNR	Owner Requirement
PEO	Program Executive Office
RAEM	Requirements Analysis and Engineering Management
RDM	Requirements Development and Management (formerly known as RAEM)
RMR	Requirements Management Repository
RTM	Requirements Traceability Matrix
SDS	Standard Data Services
SLA	Service Level Agreement
SME	Subject Matter Expert
SNOMED CT	Systematized Nomenclature of Medicine Clinical Terms
SOA	Solution Oriented Architecture
STS	Standards and Terminology Services
UCD	User Centered Design
UI	User Interface
VA	Department of Veterans Affairs
VETS	VA Enterprise Terminology Services
VHA	Veterans Health Administration
VE	VistA Evolution
VistA	Veterans Health Information Systems and Technology Architecture
VPN	Virtual Private Network
WMS	Web and Mobile Solutions

## Appendix G. Approval Signatures

The requirements defined in this document are the high level business requirements necessary to meet the strategic goals and operational plans of OAA. Further elaboration to these requirements will be done in more detailed artifacts.

### **Business Owner**

Signifies that the customer approves the documented requirements, that they adequately represent the customers desired needs, and that the customer agrees with the defined scope.



NSR 20131210 Pocket Card Mobile Application Sanders.msg

Signed: \_\_\_\_\_

Date: 3/24/2014

[Redacted Signature]

### **Business Liaison**

Signifies appropriate identification and engagement of necessary stakeholders and the confirmation and commitment to quality assurance and communication of business requirements to meet stakeholder expectations.



NSR 20131210  
Pocket Card Mobile A

Signed: \_\_\_\_\_

Date: 4/3/2014

[Redacted Signature]