**Proposal:** 18f Agile Delivery Services BPA

**Prototype:** ShopAware.gov

**Synopsis:** The concept starts with the development of a web service that receives a list of shopping list items (or any list of key words), queries the six open source FDA data APIs, and returns any data found. This web service would be made publicly available to developers of shopping list apps to add value to their apps by providing this health-related information to their users. In addition, the web service would add value to any app containing items for which FDA health information would apply.

ShopAware.gov is a prototype application designed to demonstrate how this web service can be used. The basic function of the website is to allow users to build a shopping list and automatically receive FDA health alert information for drugs, food and medical devices on their list. The alert information displayed includes recalls, adverse events and possible adverse reactions to drugs. The user enters their shopping list items in free form text. As each item is entered, the application sends the name of the item to the web service, which may return data related to that item. Items for which FDA alert information is returned are flagged with an information icon. Clicking on the icon displays the full detail about the alerts and plots their locations on a map of the United States. Users can save their shopping lists if they create an account. When they return to the site they log in to retrieve their list and get the latest FDA information for items on the list.

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| **Topic** | **Findings** |
| Target Market | -Parents  -People currently using prescription medication  -People with chronic health issues, or diseases  -People over 22 |
| Site Look | -Simple to navigate  -More information on demand, don’t clog front page (google home page) |
| Tool advantages | -Search a list that you care about for recalls, versus see all recalls and have to determine what’s useful to you  -See on a map where the latest recalls or warnings happened so you can relate it to your location |

Why would people use this service?

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| **Resource Name** | **Link** | **Findings** |
| U.S. Grocery Shopping Trends 2014 Overview | <http://www.fmi.org/docs/default-source/research/presentation.pdf?sfvrsn=0> | -social networks/media drives decision making  -mid market stores have been stagnant or shrunk, premium stores have grown, value stores have grown  -consumers increasingly value “wellness” |
| Reviews of existing FDA application tracking drug shortages | <https://play.google.com/store/apps/details?id=gov.fda.drugshortages> | -don’t want to have to log in  -retail information is important  -less information than on the website  -laggy  -just “ok” |
| Other food recall tool | <http://www.recalls.gov/food.html> | -sources data from multiple sources (FDA, FSIS, CDC, HHS)  -can see all recent activity  -no way to see if it is relevant to my shopping interests |
| Potential statistics for target market | <http://poshonabudget.com/2011/04/50-statistics-about-grocery-shopping-that-you-may-want-to-know-about.html> | -83% of shoppers make their purchase decisions at home.  -94% prepare a written list before leaving the house  -Almost half of the grocery shoppers will use coupons  -Coupons.com saved shoppers 1.2 billion dollars in 2010.  -Coupons.com visitors are 69% female, with 40% making $75,000 or more.  -Grocery iQ ap has had over 2 million downloads  -Women spent an average of 8 minutes a day grocery shopping, and men, 4 minutes  -About 18 percent of women grocery shop on a given day for an average of 45 minutes compared with 11 percent of men who averaged 39 minutes.  -Employed women spent slightly less time on these activities than other women. |
| Public health related application data | <http://thenationshealth.aphapublications.org/content/41/8/1.3.full> | -35% of adults in the US have a smartphone, that number anticipated to grow  -25% of smartphone owners go online using their phones  -similar “awareness of things that may interest me apps” “Outbreaks Near Me”  -App development a hot topic in government agencies. Data has been made available to app developers, EPA announced the launch of Apps for the Environment, a challenge to present EPA data in new and innovative ways  -Make sure the apps we create are useful and science-based |

The website utilizes “human-centered” (or all-inclusive) and usability principles such as the following:

1. **Equitable use:** doesn’t disadvantage or stigmatize, easily communicates information regardless of users sensory abilities
2. **Flexibility in use:** wide range of skill levels for user, how fast a user who has never seen the user interface before can accomplish basic tasks and how fast an experienced user can accomplish tasks
3. **Simple intuitive design:** effortless understanding of architecture and navigation of site
4. **Memorability:** after visiting the site, if a user can remember enough to use it effectively in future visits
5. **Tolerance for error:** how often users make errors while using the system, how serious the errors are, and how users recover from the errors
6. **Subjective satisfaction:** does the user like using the system?

**Mobile Devices**

Create a mobile shopping list application that provides essentially the same capability as the web site. The mobile application shall be available from the Apple and Android stores.

**Key Application Features**

* “Create an Account” so users can save and reuse the shopping list and create multiple lists.
* The account will allow users to access data from website or mobile app
* Users should be able to receive alerts and save the shopping lists from the website application or the mobile app
* Ability to specify alert status (daily, weekly, etc.)
* Ability to select a category for the alert (Recall, Event)
* Ability to add Health risks and specific allergens
* Ability customize alerts by geographic region
* Ability to ***Share*** the search result data via Facebook or Twitter
* Ability to use a mobile device to take a picture of the barcode on an item in the store to see if it has been part of a recall

**Keeping the Website “Human-centered”**

* Adjustable font size on pages with large amounts of text
* Making all icons color-coded for ease of recognition, but also labeling each icon to accommodate users with visual sensory issues.
* Incorporating the “breadcrumb” menu at the top of each web page, so the user can easily track where they are and return to their starting point.
* Simple functionality, “enter the item and enter the plus icon” - to allow users to quickly add their items and see results. Simple navigation throughout website and mobile application.
* Add the ability for the user to evaluate whether the data returned was helpful in meeting their needs.

Figure - ShopAware Web Service Concept Diagram

