

# Attachment E – Approach Criteria Evidence Supplementary Evidence

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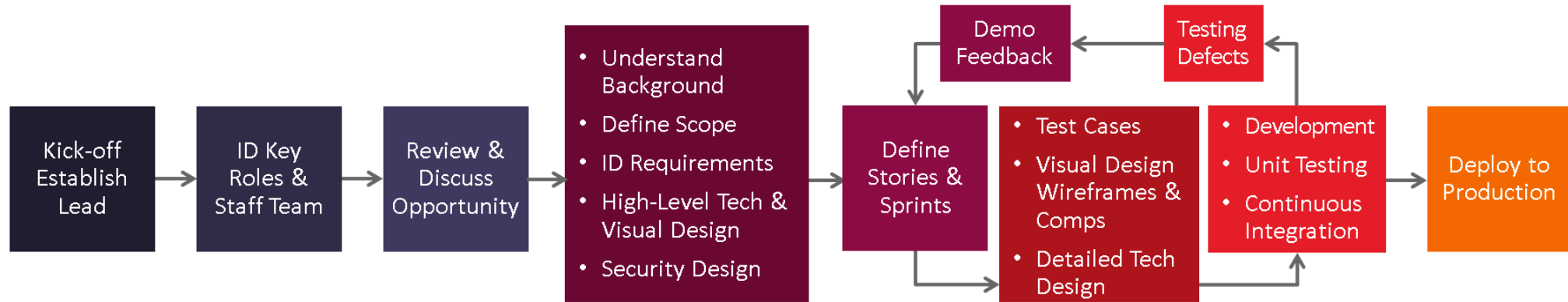
Request for Quotation No. 4QTFHS150004  
Agile Delivery Services (ADS I)

**Sapient**

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# Our Approach / Process



## Criteria

A

B

C, E, F, G

D, F, G, I, K, L, M, N

H, J, O, P, Q

## Roles

- Product Manager

- Product Manager
- Delivery Manager

- Product Manager
- Delivery Manager
- Business Analyst
- Digital Performance Analyst
- Developer
- Visual Designer
- Other Creatives

- Everyone

- Everyone

- Technical Architect
- Frontend Web Developer
- Backend Web Developer

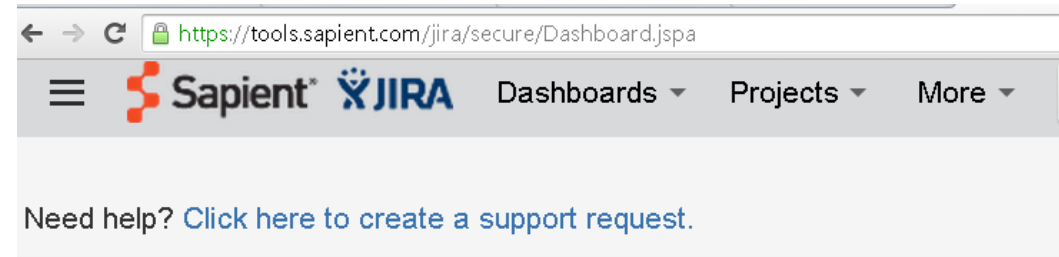
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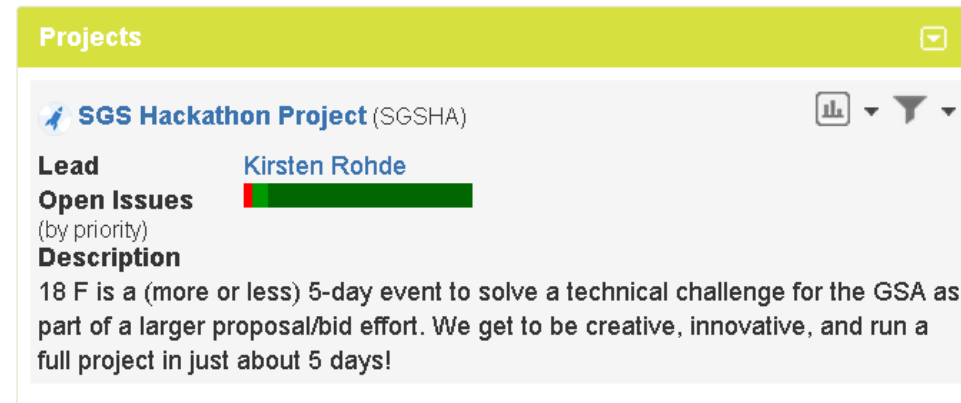
Criteria A	Pg. 4	Criteria J	Pg. 19
Criteria B	Pg. 5	Criteria K	Pg. 20
Criteria C	Pg. 6	Criteria L	Pg. 21
Criteria D	Pg. 7	Criteria M	Pg. 22
Criteria E	Pg. 9	Criteria N	Pg. 23
Criteria F	Pg. 10	Criteria O	Pg. 24
Criteria G	Pg. 12	Criteria P	Pg. 25
Criteria H	Pg. 17	Criteria Q	Pg. 26
Criteria I	Pg. 18		

# Criteria A

*assigned one leader, gave that person authority and responsibility, and held that person accountable for the quality of the prototype submitted*



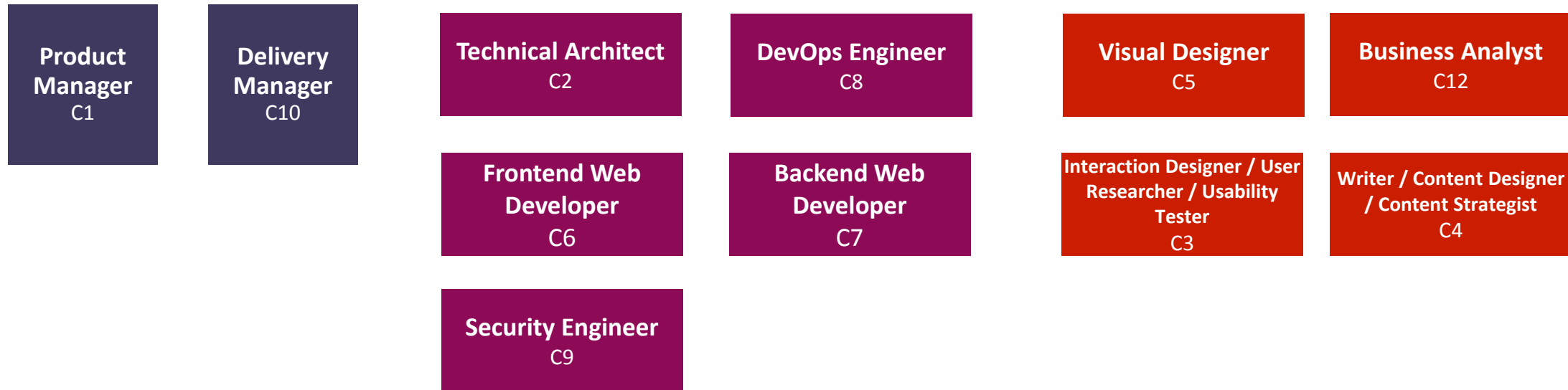
## SGS Hackathon Project Board



**KIRSTEN ROHDE, FEARLESS LEADER.** Kirsten is responsible for managing track leads, dividing/combining/shuffling sub-teams, and ensuring the quality of the final prototype. To the right, we provide a snapshot of our JIRA Project Board, which shows Kirsten as our lead.

# Criteria B

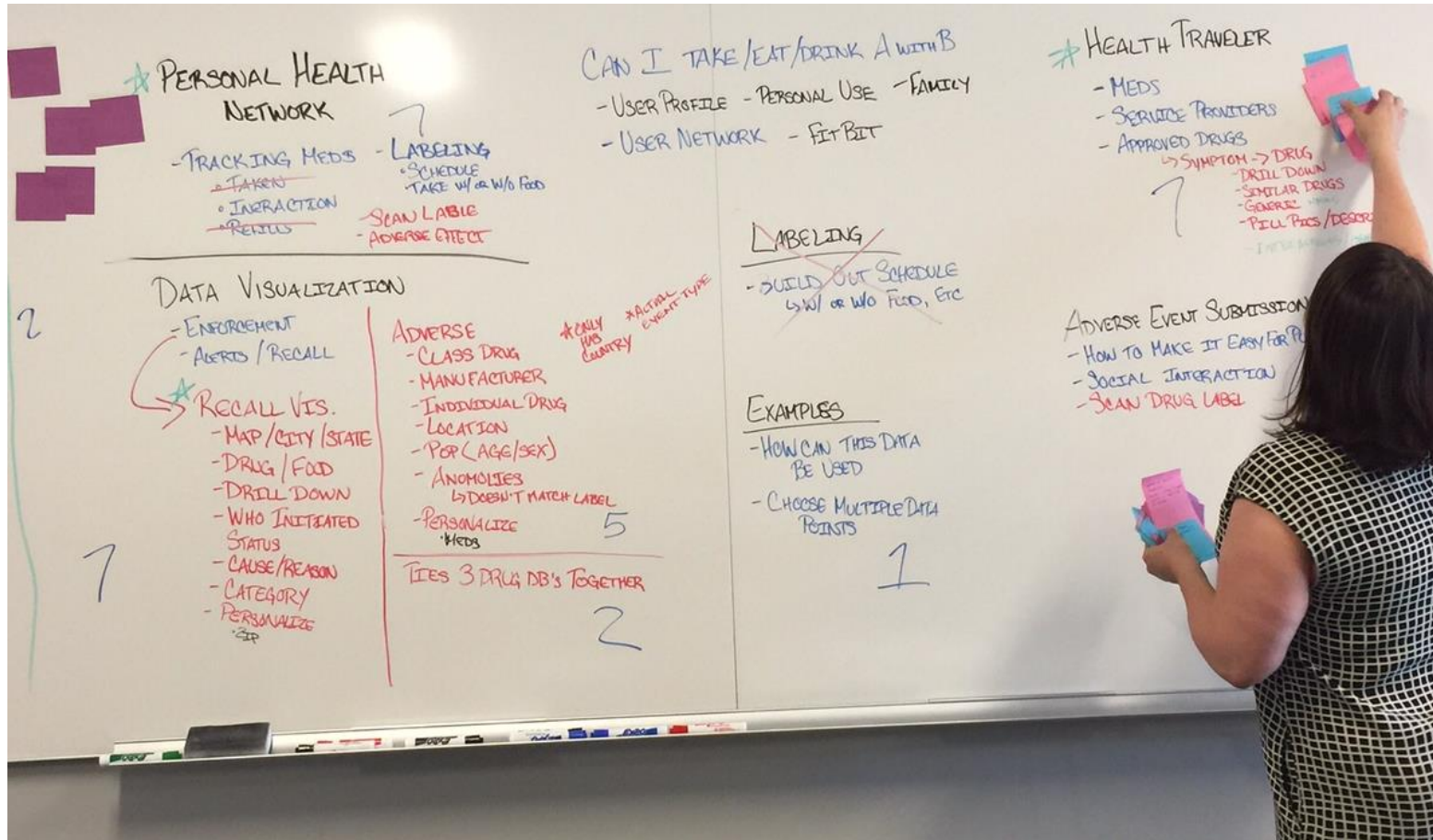
*assembled a multidisciplinary and collaborative team including a minimum of 5 labor categories from the Full Stack Pool labor categories to design and develop the prototype*



**THE PROJECT TEAM.** Our project team was composed of team members that covered 11 of the 13 available LCATS in Pool Three.

# Criteria C

*understand what people need, by including people in the prototype development and design process*



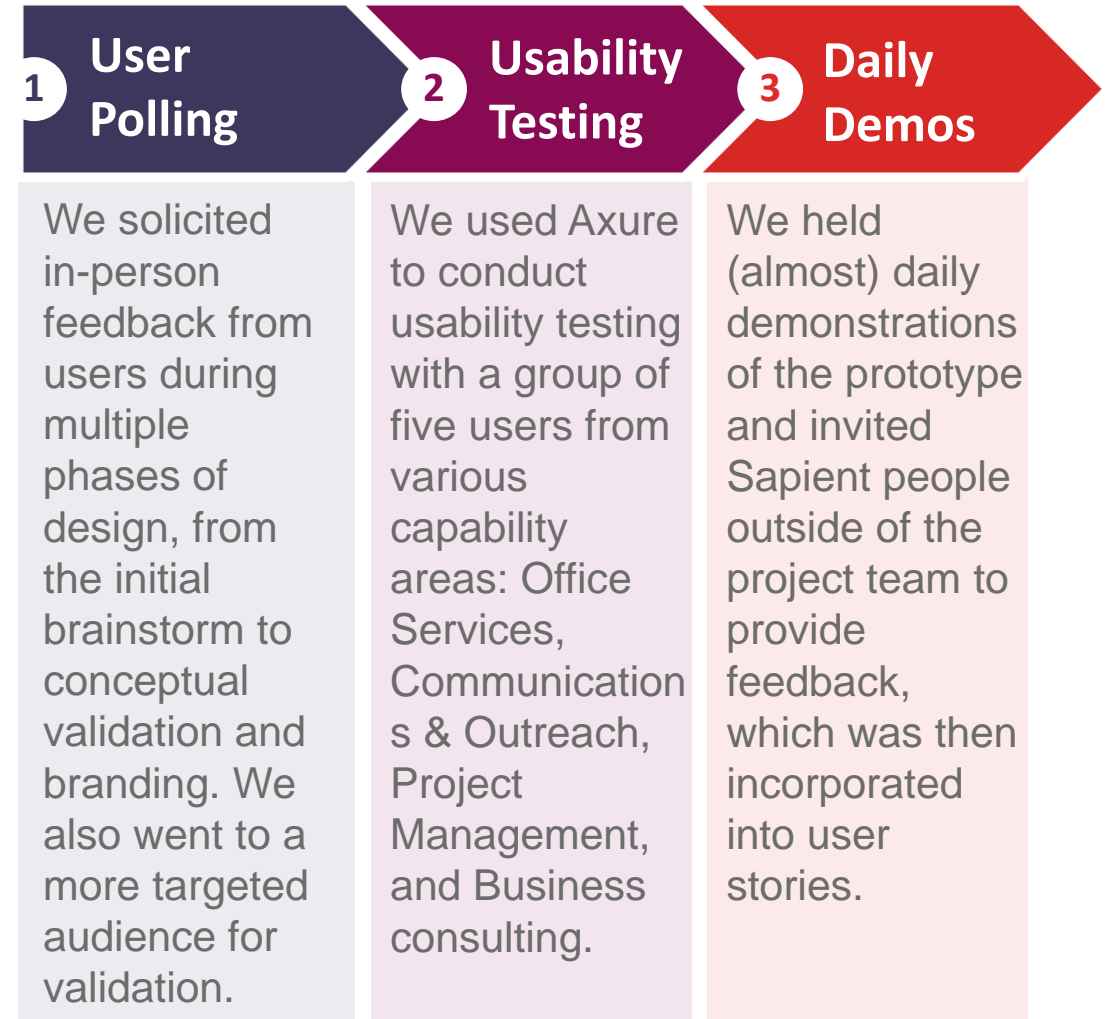
## JUNE 18, 2015. VOTING ON POTENTIAL PROTOTYPE IDEAS. Business Analyst

Jessica collects sticky notes after a voting session. We brought in five Sapient employees outside of the Sapient project team to participate in the vote. Jessica facilitated the session and presented the context and concept for the ideas developed by the project team. Voters were each given three votes. Significantly, the chosen concept was “undoable” and we had to go back to the drawing board.

# Criteria D

*used at least three "human-centered design" techniques or tools*

Our design process is driven by feedback from users.

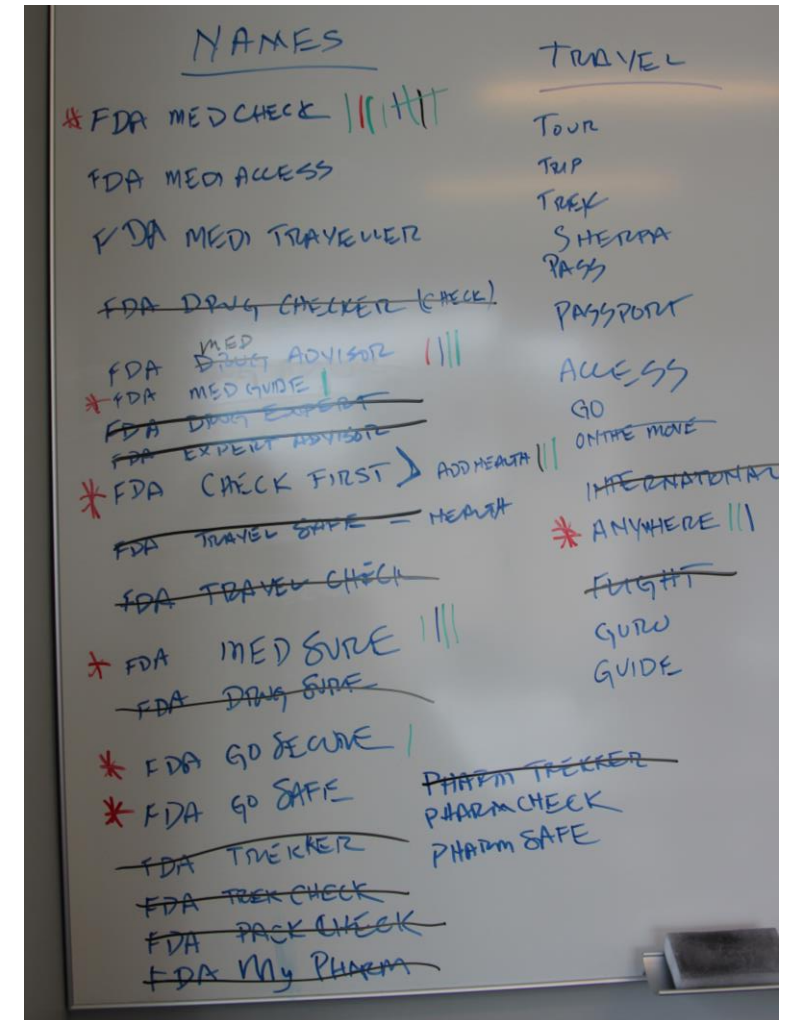




## Criteria D, Continued



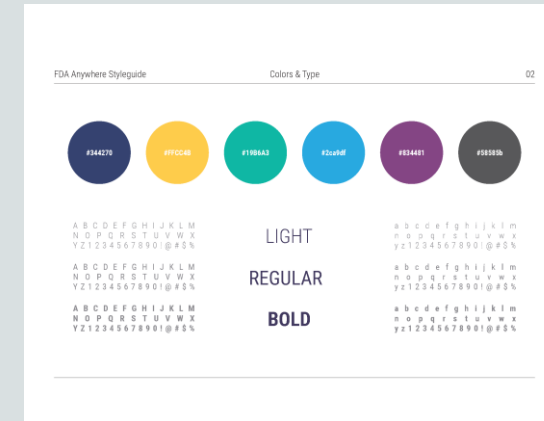
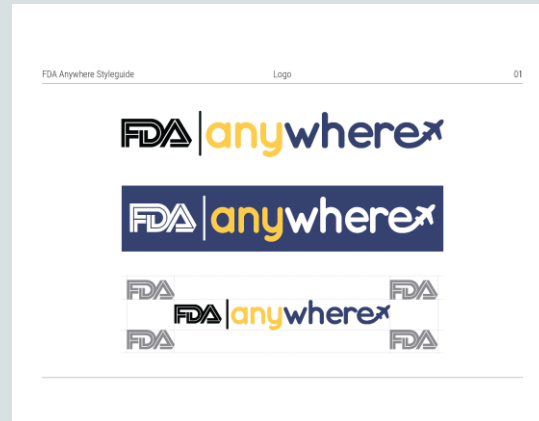
**JUNE 19, 2015. PROTOTYPE NAMING FOCUS GROUP.** We invited Sapient employees outside of the project team to participate on focus groups. (Left) Senior business consultant Shedisha provides input on the potential prototype names. (Right) The results of the focus group.





# Criteria E

*created or used a design style guide and/or a pattern library*



**A SIMPLE STYLE GUIDE.** We developed a high-level style guide as a reference for the creative and development team members (excerpt shown above). We've included a copy of our style guide in our repository: <https://github.com/sapientgov/openfda-travel/blob/master/styleguide-fda-anywhere.pdf>

# Criteria F

*performed usability tests with people*

**From:** Kirsten Rohde  
**Sent:** Tuesday, June 23, 2015 9:45 PM  
**To:** GSA Hackathon 2015  
**Subject:** Usability tests

[Next](#) [Last](#)

I ran two usability tests tonight with two individuals who both have to deal with long-term health conditions. Both really liked the use of the application. Below are some of the notes. Both had some suggestions for changes and clarifications.

**Mother of 3; with one severely handicapped child; like to travel a lot; have family in the area where kids spend many weekends:**

- Want to look all meds and allergies at the same time, not one by one (summary view)
- Would like ability to add physician's contact info and send that person my profile info
- Label for recall of drugs needs to be clearer—in the US, elsewhere? Why would I want to know?
- Translator for brand name to generic/commonly recognized name
- Meds—esp. for kids (frequency and dosage being taken) important based on weight for children (not as important for adults); need to know dosage for adults as well. – create space to be specific morning/evening, etc.
- Last refill should be option to add
- Ability to share only parts of the profile, such as allergies only (especially with non-family members)
- Create multiple groups that can work in different locations/events
- Print option for new doctor with meds/allergies, etc.
- Diagnosis info (free text)
- Use case: meds lost; dr prescribes sth different to be able to get with insurance; cross check on allergies/other meds.

**USABILITY TESTS.** Once we had a validated concept, we took our prototype to a more targeted audience, including caregivers and users with chronic health conditions.

We spoke with three users who both validated the concept and provided us with a wealth of ideas for future development. (Left) An e-mail excerpt from Kirsten Rohde to the project team, detailing the results of a usability test.

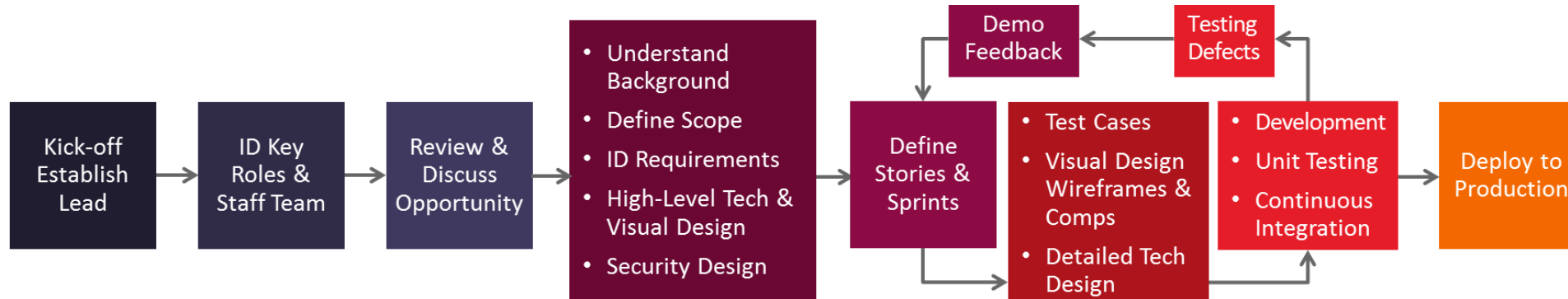
## Criteria F, Continued

**JUNE 23, 2015. USABILITY TESTING.** (Below) Jacques, Interaction Designer / User Researcher / Usability Tester, guides a group of five users (Sapient employees outside of the project team) through usability testing on Axure. (Right) Desktop screenshots of Axure. Users tested the prototype on desktops, tablets, and mobile phones.



# Criteria G

*used an iterative approach, where feedback informed subsequent work or versions of the prototype*



We initially clarified a broad understanding of the background, defined scope, identified high level requirements and high-level tech and creative design.

We then used a Scrum-based Agile Framework for iterative development using consecutive Sprints as time-boundary definitions:

- Requirements (wireframes, story definition, sprint definition)
- Design (creative visual design comps, detailed technical design)
- Development (story development, continuous integration, unit testing)
- Testing (test case creation, usability testing, identify known defects)
- Review (daily demo, user acceptance, feedback capture, identify new defects/enhancements)

Daily demo feedback was looped back into the process as either new defects or potential enhancements entered into the product backlog, prioritized and potentially carried over to the next Sprint.

## Criteria G, Continued

*used an iterative approach, where feedback informed subsequent work or versions of the prototype*

**We used JIRA as our application lifecycle management (ALM) tool. In the following slides, we show screenshots of the evolution of our JIRA project and Agile dashboard, tracking the increase in stories, test cases, and defects from sprint to sprint.**

**We developed user stories based on test cases, defects, and feedback from demos and usability test throughout the life cycle of this project.**



# Criteria G, Continued

**BACKLOG.** To the right, we show snapshots of our backlogs from Sprints 2 and 3, demonstrating the increase in backlog as a result of feedback from daily demonstrations, defect triage, and offline discussions.

Backlog 8 issues		Create Sprint
	↓ SGSHA-62 Add Profile	
	↓ SGSHA-63 Personlaize label details from profile	
	↓ SGSHA-64 Map view widget	
	↓ SGSHA-65 Map POI	
	↓ SGSHA-66 FDA approved questions	
	↓ SGSHA-67 Initial Questions Display	
	↓ SGSHA-17 Has Recall Page	
	↓ SGSHA-19 Can I take Page	
+ Create issue		

Backlog 11 issues		Create Sprint
	↓ SGSHA-18 FDA Approved Page	
	↓ SGSHA-11 Jenkins Setup	
	↓ SGSHA-64 Map view widget	
	↓ SGSHA-60 Recalls details display	
	↓ SGSHA-62 Add Profile	
	↓ SGSHA-63 Personlaize label details from profile	
	↓ SGSHA-65 Map POI	
	↓ SGSHA-71 Drug Search by 'All' Option	
	↓ SGSHA-72 Add Additional Profiles	
	↓ SGSHA-73 Manage Profiles	
	↓ SGSHA-74 Log In/Logout	

# Criteria G, Continued

**SPRINTS 1 AND 2.** Below is a screenshot of our Project Dashboard, which provides an overview of the user stories tracked in Sprints 1 and 2.

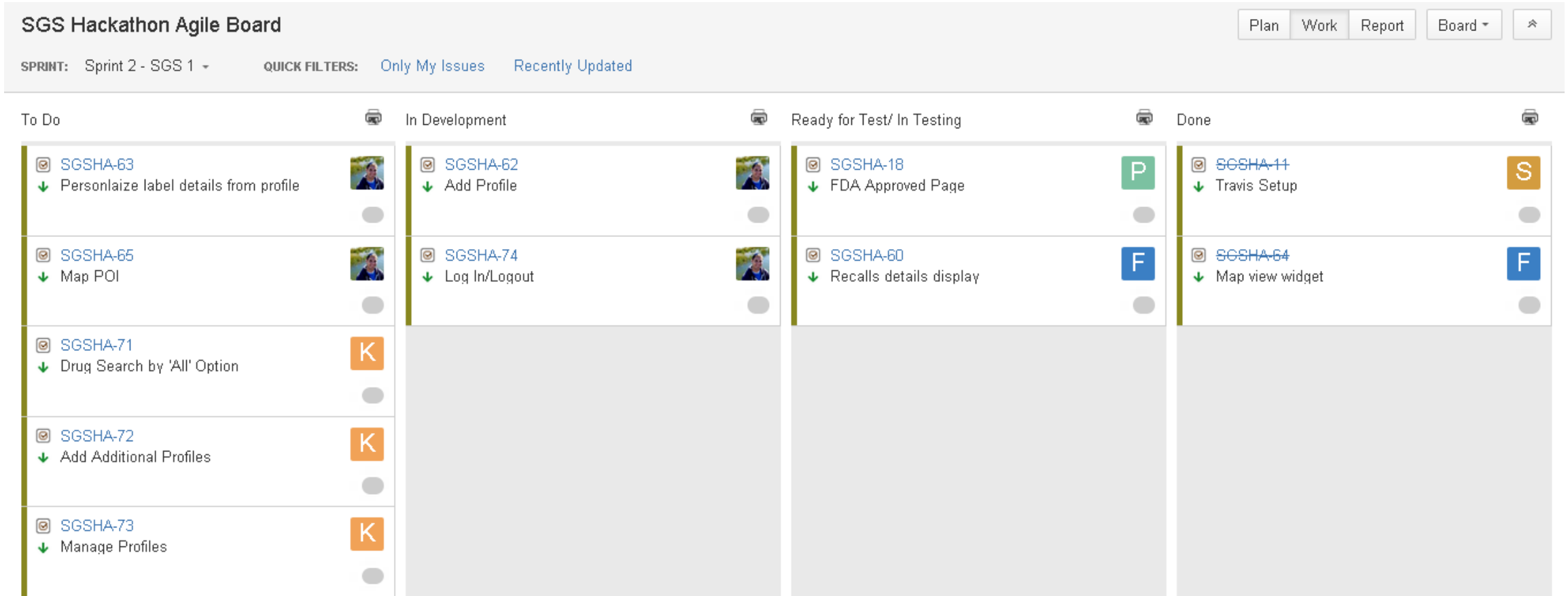
Two Dimensional Filter Statistics: Sprint 1 Tech Stories			
Assignee	Status		
	CLOSED	DROPPED	T:
Christopher Perry	3	3	6
Divya Murali	0	1	1
Farooq Khan	1	0	1
Preeti Roy	1	0	1
Umar K. Munroe	0	1	1
Total Unique Issues:	5	5	10
Showing 5 of 5 statistics. Filter: <a href="#">Sprint 1 Tech Stories</a>			

Two Dimensional Filter Statistics: Sprint 2 Tech Stories					
Assignee	Status				T:
	OPEN	CLOSED	IN DEVELOPMENT	READY FOR TESTING	
Christopher Perry	2	0	2	0	4
Farooq Khan	0	1	0	1	2
Kirsten Rohde	3	0	0	0	3
Preeti Roy	0	0	0	1	1
Scott Andrew Magee	0	1	0	0	1
Total Unique Issues:	5	2	2	2	11
Showing 5 of 5 statistics. Filter: <a href="#">Sprint 2 Tech Stories</a>					

**DEFECT TRACKING.** Below, we show a snapshot of our defects overview, showing the number of defects by status and priority.

Two Dimensional Filter Statistics: Defects				
Priority	Status			T:
	OPEN	CLOSED	READY FOR TESTING	
↑ P2 - Critical	1	0	0	1
↑ P3 - Major	0	3	3	6
↓ P4 - Minor	6	5	6	17
Total Unique Issues:	7	8	9	24
Showing 3 of 3 statistics. Filter: <a href="#">Defects</a>				

# Criteria G, Continued



**AGILE BOARD.** Above is snapshot of our JIRA Agile board, a dynamic view of progress made against stories.

## Criteria H

*created a prototype that works on multiple devices, and presents a responsive design*

Our prototype is responsive and works on multiple devices. <http://fdaanywhere-fifteenfifteen.rhcloud.com>

# Criteria I

*used at least five modern and open-source technologies, regardless of architectural layer (frontend, backend, etc.)*

**Modern open-source technologies  
utilized in the development of our  
prototype include:**

- Node.JS
- Backbone.JS
- mongoDB
- Express
- Compass
- Grunt
- Karma
- Jasmine
- jQuery



## Criteria J

*deployed the prototype on an Infrastructure as a Service (IaaS) or Platform as a Service (PaaS) provider, and indicated which provider they used*

We utilized OpenShift, as evidenced by our URL. OpenShift is a Red Hat Platform-as-a-Service (Paas). <http://fdaanywhere-fifteenfifteen.rhcloud.com>

## Criteria K

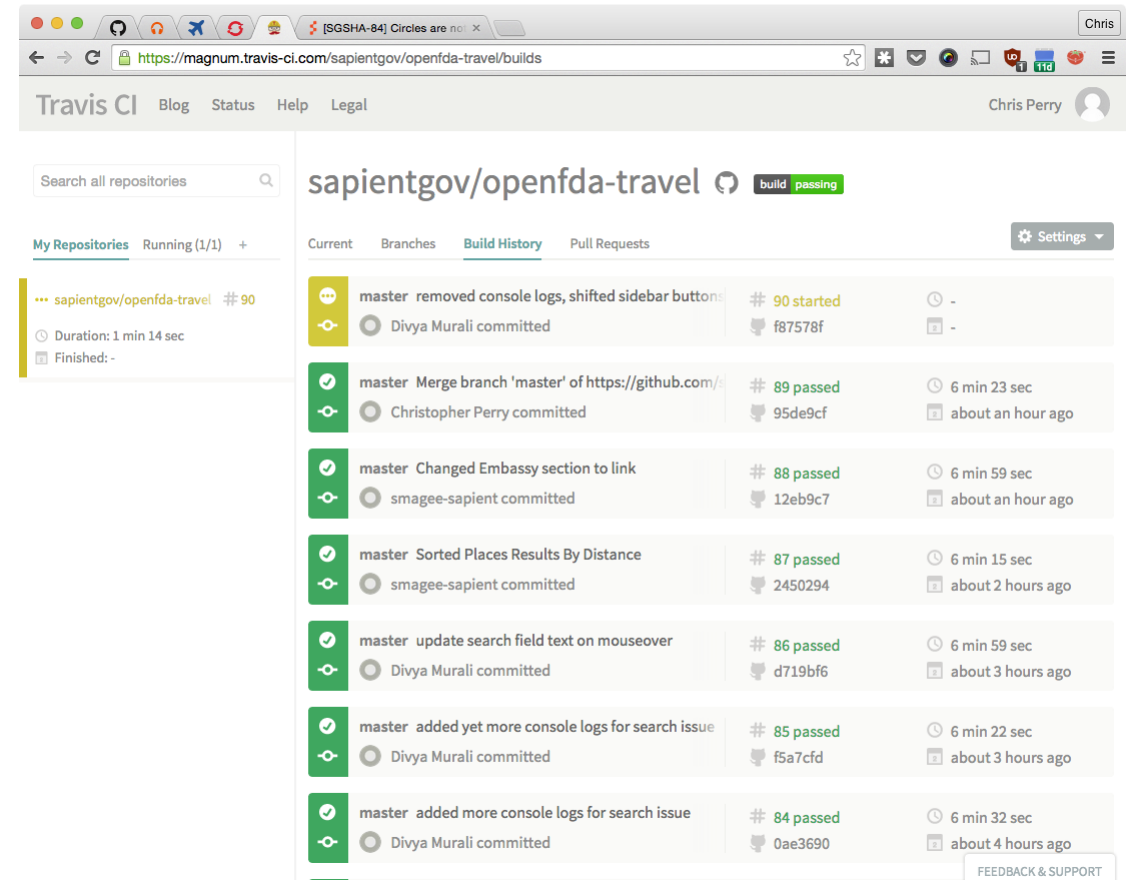
*wrote unit tests for their code*

Our unit tests can be found in our GitHub repository. <https://github.com/sapientgov/openfda-travel/tree/master/test/>

# Criteria L

*set up or used a continuous integration system to automate the running of tests and continuously deployed their code to their IaaS or PaaS provider*

We utilized Karma (script runner that builds and executes unit tests locally) and Travis CI (build, execute unit tests, and deploys to server) as our continuous integration / continuous deployment system.



SCREENSHOT OF TRAVIS CI

## Criteria M

*set up or used configuration management*

Use of configuration management is demonstrated in the code. We used Git (github.com) to version control code. Grunt, a JavaScript task runner, is used to automate the application build for multiple environments.

# Criteria N

*set up or used continuous monitoring*

Continuous monitoring starts with a security impact analysis of the application/system that will be used to drive the security requirements and control based on the application technical architecture. A threat assessment, similar to [18f\\_threat\\_assessment.html](#) conducted for FDA Anywhere, is an example of a security impact analysis. Implementing security is then incorporated into the entire SDLC from design, to code reviews, to continuous integration executing static and dynamic security tests. With security tests integrated into an automated build process using a continuous integration tool like Travis CI, the security vulnerabilities such as of the application can be tested with each code check-in. When deployed, active intrusion detection systems and firewalls (software and/or appliance) at application and network level can be deployed to detect and prevent security threats. A security plan is implemented where security assessments are performed periodically to verify that the security stance is maintained.

An example of the vulnerability report generated by Wapiti of FDA Anywhere can be found in github in the docs folder.



## Criteria O

*deploy their software in a container (i.e., utilized operating-system-level virtualization)*

Our solution has been setup for deployment with Docker (<https://www.docker.com/>) which packages application with all of its dependencies into a standardized unit for software development. We have included a Docker build file (<https://github.com/sapientgov/openfda-travel/blob/master/Dockerfile>) that will execute the build steps (running unit tests and ensuring all dependencies are available), and generates a VM with the deployed application that can be run in an independent virtual hosting environment.

## Criteria P

*provided sufficient documentation to install and run their prototype on another machine*

Our documentation is provided in the  
README file.

<https://github.com/sapientgov/openfda-travel/blob/master/README.md>

## Criteria Q

*prototype and underlying platforms used to create and run the prototype are openly licensed and free of charge*

**The prototype architecture consists of only technologies freely available on the internet with variations of open source libraries (see our response to Criteria I). Source code is hosted on GitHub and is freely accessible.**

Want to see more?

Check out our Medium site!

(<https://medium.com/@Sapientgov/sapient-government-services-640e83187da1>)