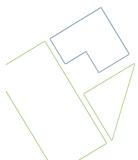


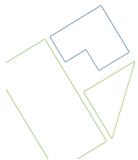
Supporting Evidence
For PG Public Services
OpenFDA

6.25.15

- Criteria a – Assigned Leader
- Criteria b – Assembled a Multidisciplinary team
- Criteria c – Understand What People Need
- Criteria d – Use of Human-Centered Design Techniques
- Criteria e – Use of Pattern Library
- Criteria f – Use of Modern Technology
- Criteria g – Performed Usability Test
- Criteria h – Used an Iterative Approach
- Criteria i – Created a Prototype
- Criteria j – Instructions to Install Elsewhere
- Criteria k – Use of Licensed, Free Software



Evidence for Design Pool One



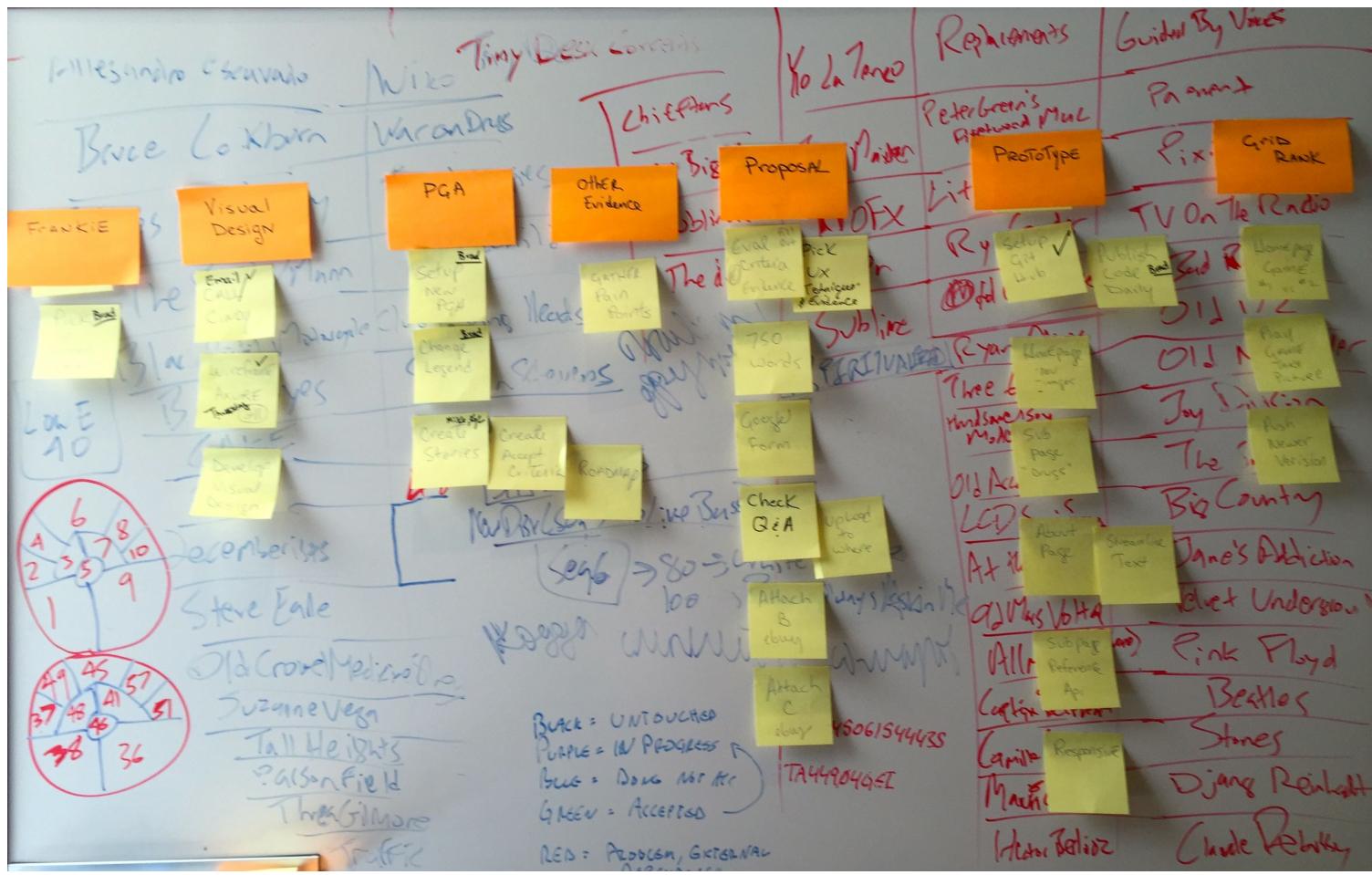
We assigned Mike Gertz, one of our Directors as Leader and Product Manager of this effort.

- Proven team leader
- PMP certified
- 20+ years experience
- Strong Business and Technology background
- Led Agile projects in 2014-2015
- Currently advises Government on Agile and IT procurements



Criteria a – Assigned Leader

Mike held daily Scrum meetings with the team to review task status, create chores, and discuss issues.



Criteria b – Assembled Multidisciplinary Team



Mike Gertz
Leader/Product Manager

Roles:

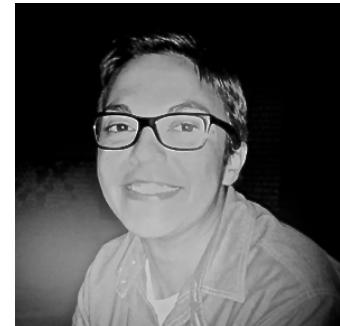
- Product Leadership
- UX Inspection
- Requirements
- Conceptual Design
- User Stories
- Prioritization
- Sprint Plan / Chores
- User Feedback
- Content Strategy



Brad Atefi
Front End Dev.

Roles:

- Frontend Development
- Javascript
- Conceptual Design
- User Stories
- Content Strategy
- Estimation



Cindy Vazquez
Visual Designer

Roles:

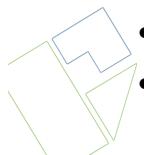
- Visual Design
- Pattern Library



Jeff Young
Interaction Designer

Roles:

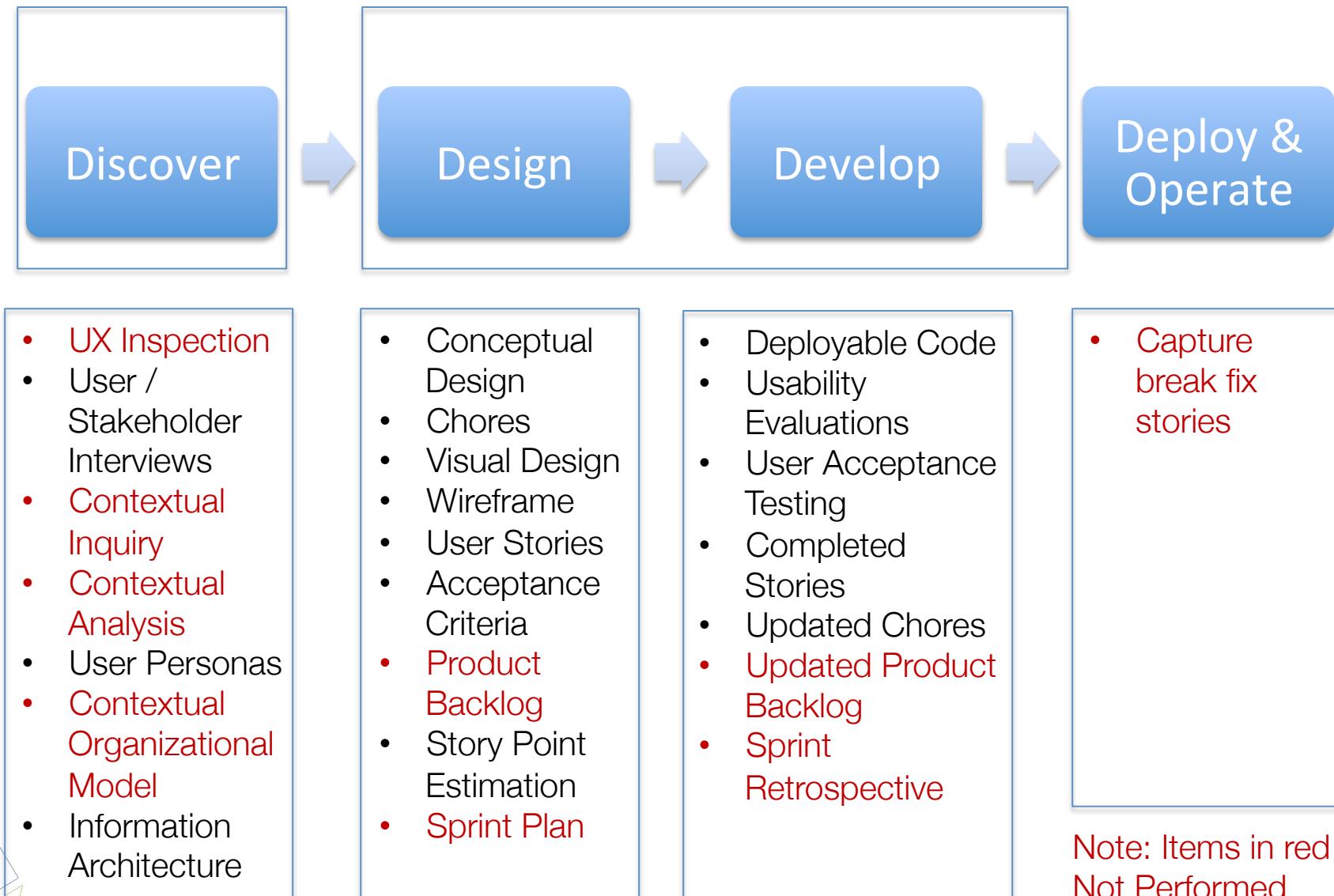
- Wireframes
- UX Inspection
- Requirements
- Conceptual Design



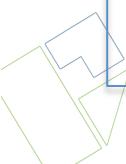
Sprint 0

Sprint 1, 2, ...

Criteria b – Assembled Multidisciplinary Team



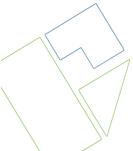
Note: Items in red were
Not Performed
For Open FDA



Criteria c – Understand What People Need

We interviewed users to identify current processes & pain points.

Ref	Category	Pain Point
6	Content	The about page is actually quite confusing to the end user. It describes how the program got started when really all that needs to be known is what it does in as simple a way as possible
10	Content	Not clear immediately from the Home Page as to what the site is all about
5	Functionality	In order to see json, you need to copy link and open in new tab. Why not just have this as a button to open link in new tab?
2	Home Page	The font of 'Drugs' on the drug pages is smaller than adverse events, labeling, and enforcement reports even though they are a lower level navigation.
8	Home Page	The main graphic on the homepage contains links (3 deep). End users are confused on what to click on or why to click on it
12	Home Page	Wasting prime real estate on the Home Page - White space in upper left hand corner is not effectively utilized; white space below the vertical navigation is also not utilized
13	Home Page	Need simple titles, fewer words
7	Info Arch	The information that developers really need to use the API, such as variables, is hard to find (or buried too deep) in the site
9	Info Arch	The information and functions available for Drugs, Devices, and Food are all pretty similar, but the site treats it as separate things; need to be more efficient in the design and presentation of data
1	Navigation	Top level navigation is not clear at all
3	Navigation	Drugs, Devices, and Food should doesn't remain in the top nav along with the logo to take you to the home page and a differentiated about page button as that is a separate page type from home page, drugs, devices, and food.
4	Navigation	Horizontal/vertical nav can go away entirely and instead have a dropdown that takes you to predefined queries.
11	Responsive	When viewing the site from Mobile Device pages and popups do not present well
14	Sub Page	The double horizontal tabs on the Drugs, Devices, and Food pages are confusing
15	Sub Page	The search parameters in the API section are changeable only by user manual entry; forces user to have to look up what syntax for parameters



Criteria c – Understand What People Need

We identified *the Developer* as the user persona for the site.

Persona – The Developer



Quote – "I need it now, and bug free"

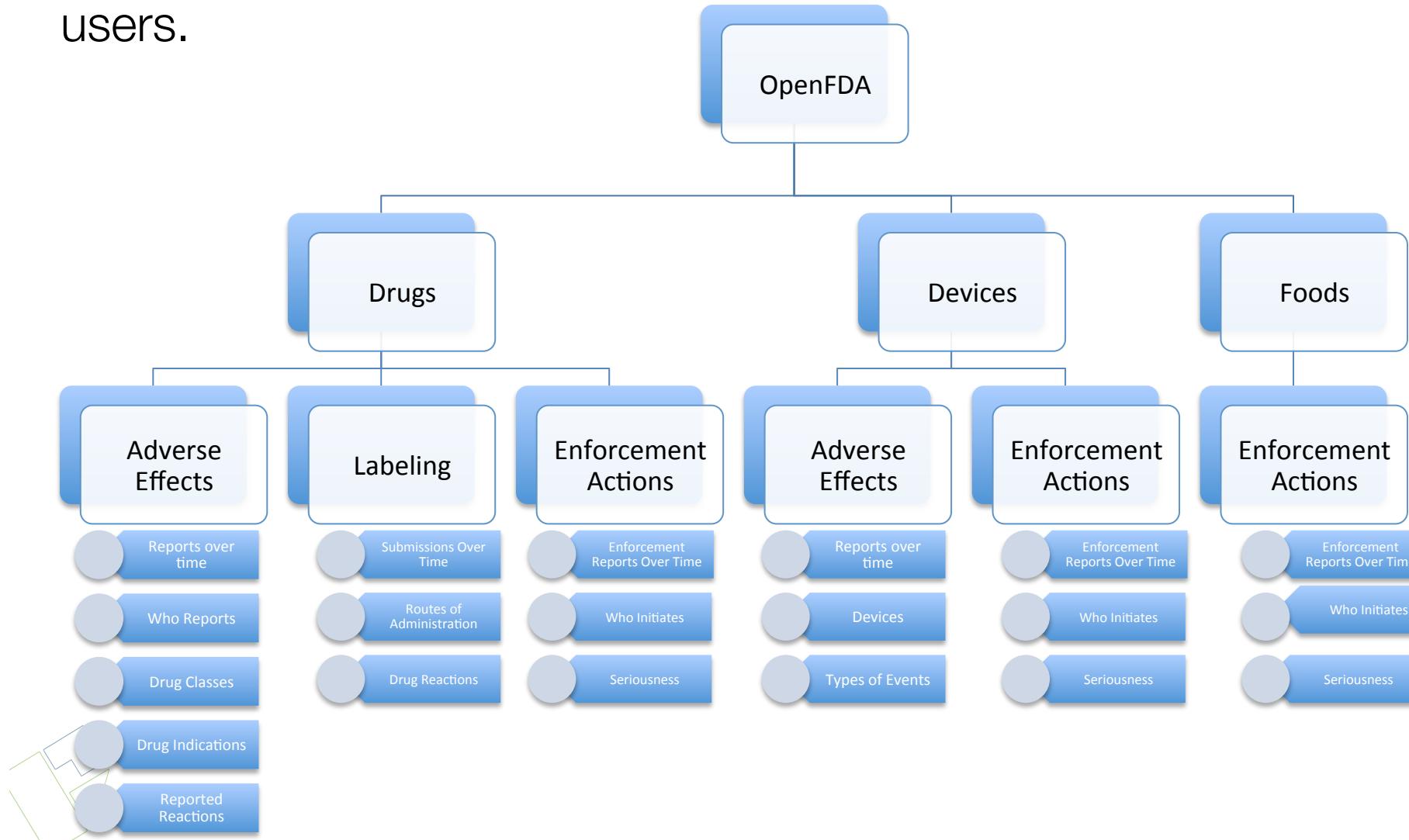
Role – The Developer needs to easily query and ingest data into his application to create graphics and visualizations for his client.

- Goals
 - Locate the type of data that his client needs
 - Understand the parameters
 - Build the query
 - Run/test query
 - Get JSON
 - Integrate into his code build
 - Test and verify that it works



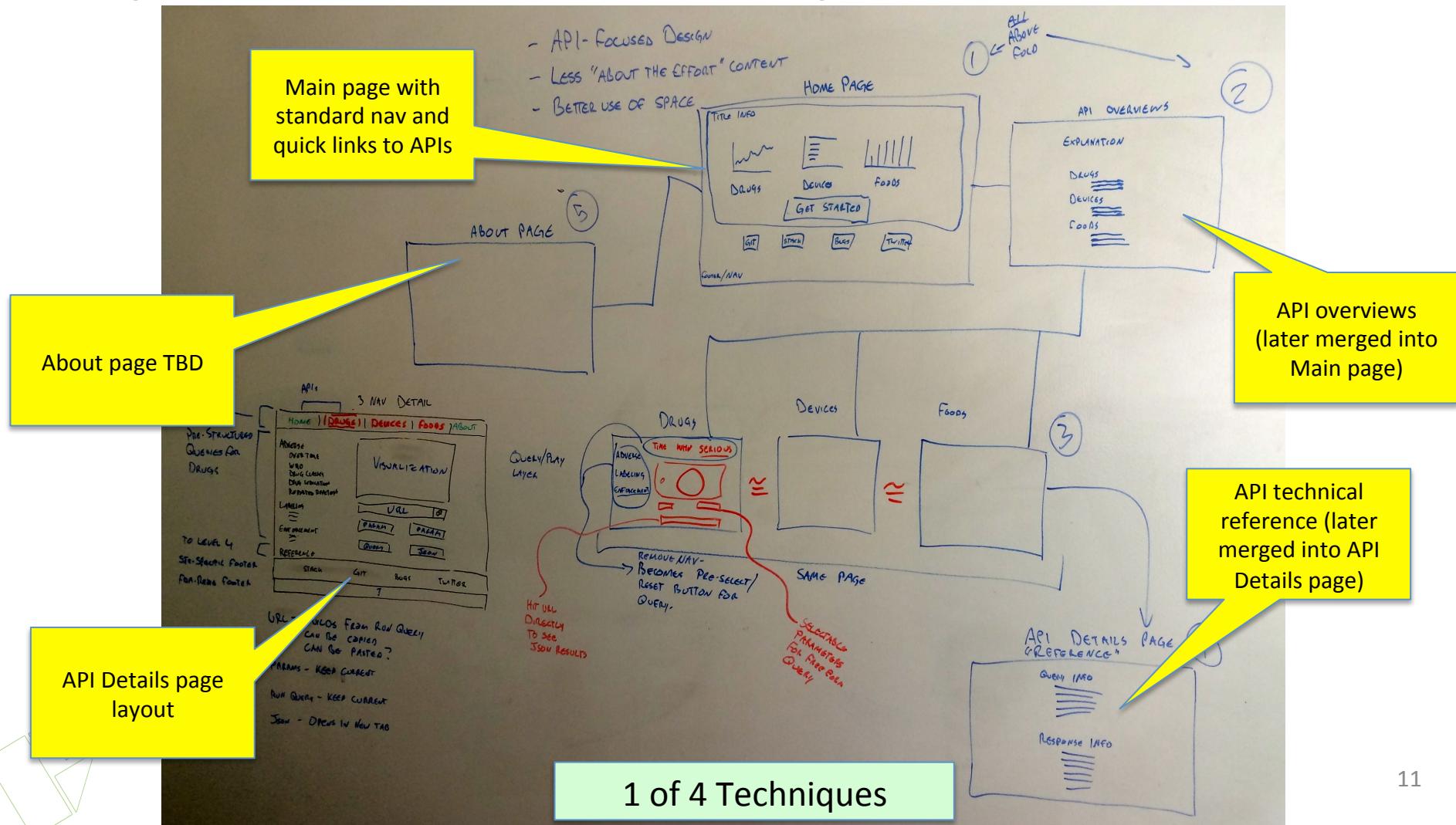
Criteria c – Understand What People Need

Our Interaction Designer developed an Information Architecture to understand how information was organized and utilized by the users.



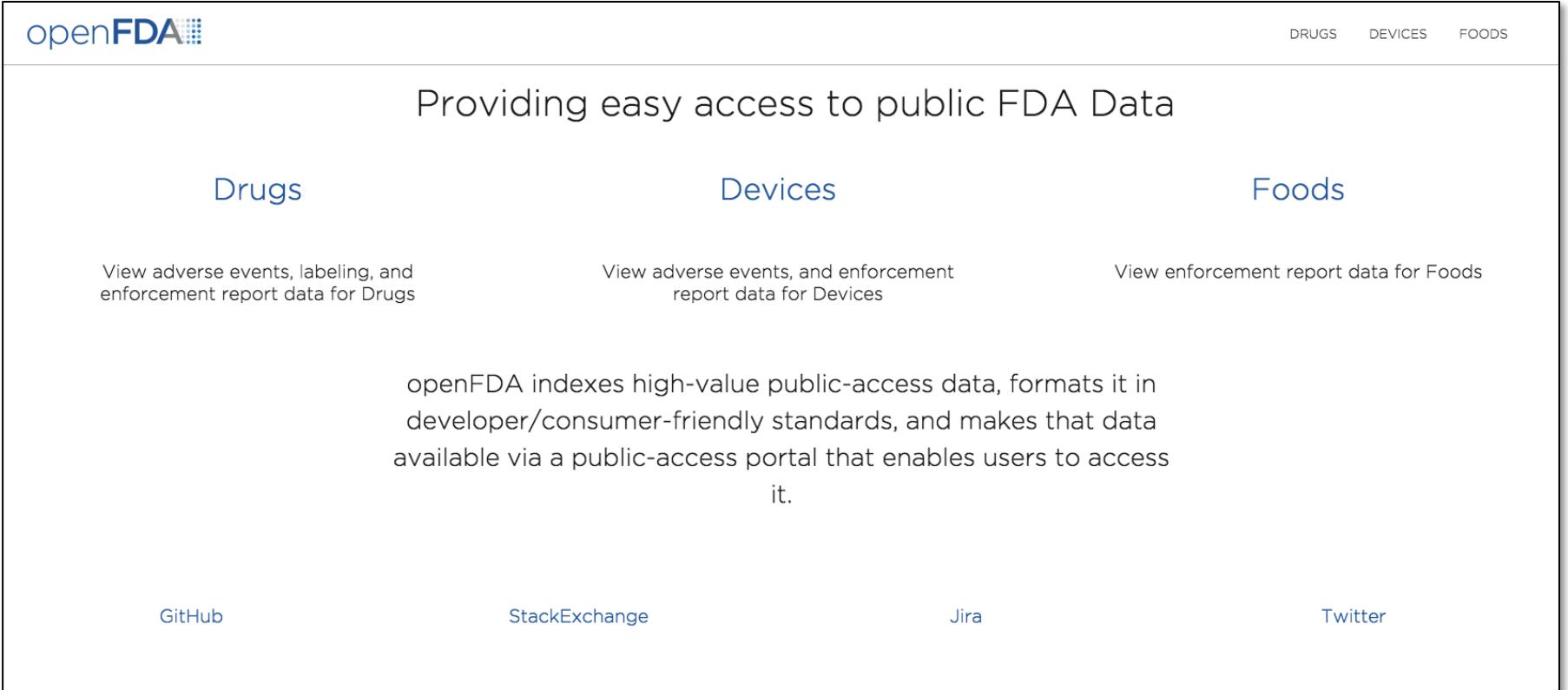
Criteria d – Use of Human Centered Design Techniques

We developed a Conceptual Design that simplifies and makes things more intuitive while addressing the whole experience.



Criteria d – Use of Human Centered Design Techniques

Our Interaction Designer developed wireframes for the homepage.



The screenshot shows the openFDA homepage. At the top, there's a navigation bar with the openFDA logo on the left and links for DRUGS, DEVICES, and FOODS on the right. The main heading is "Providing easy access to public FDA Data". Below this, there are three main sections: "Drugs", "Devices", and "Foods". Each section has a brief description and a larger explanatory paragraph below it. At the bottom, there are links to GitHub, StackExchange, Jira, and Twitter.

openFDA

DRUGS DEVICES FOODS

Providing easy access to public FDA Data

Drugs

View adverse events, labeling, and enforcement report data for Drugs

Devices

View adverse events, and enforcement report data for Devices

Foods

View enforcement report data for Foods

openFDA indexes high-value public-access data, formats it in developer/consumer-friendly standards, and makes that data available via a public-access portal that enables users to access it.

GitHub

StackExchange

Jira

Twitter



Our Interaction Designer developed wireframes for the Responsive homepage.



The wireframe shows a mobile-optimized interface for the openFDA website. At the top, the 'openFDA' logo is displayed next to a three-line menu icon. The main heading 'Providing easy access to public FDA Data' is centered above three categories: 'Drugs', 'Devices', and 'Foods'. Each category has a brief description below it. The 'Drugs' section describes viewing adverse events, labeling, and enforcement report data. The 'Devices' section describes viewing adverse events and enforcement report data. The 'Foods' section describes viewing enforcement report data.

openFDA

Providing easy access to public FDA Data

Drugs

View adverse events, labeling, and enforcement report data for Drugs

Devices

View adverse events, and enforcement report data for Devices

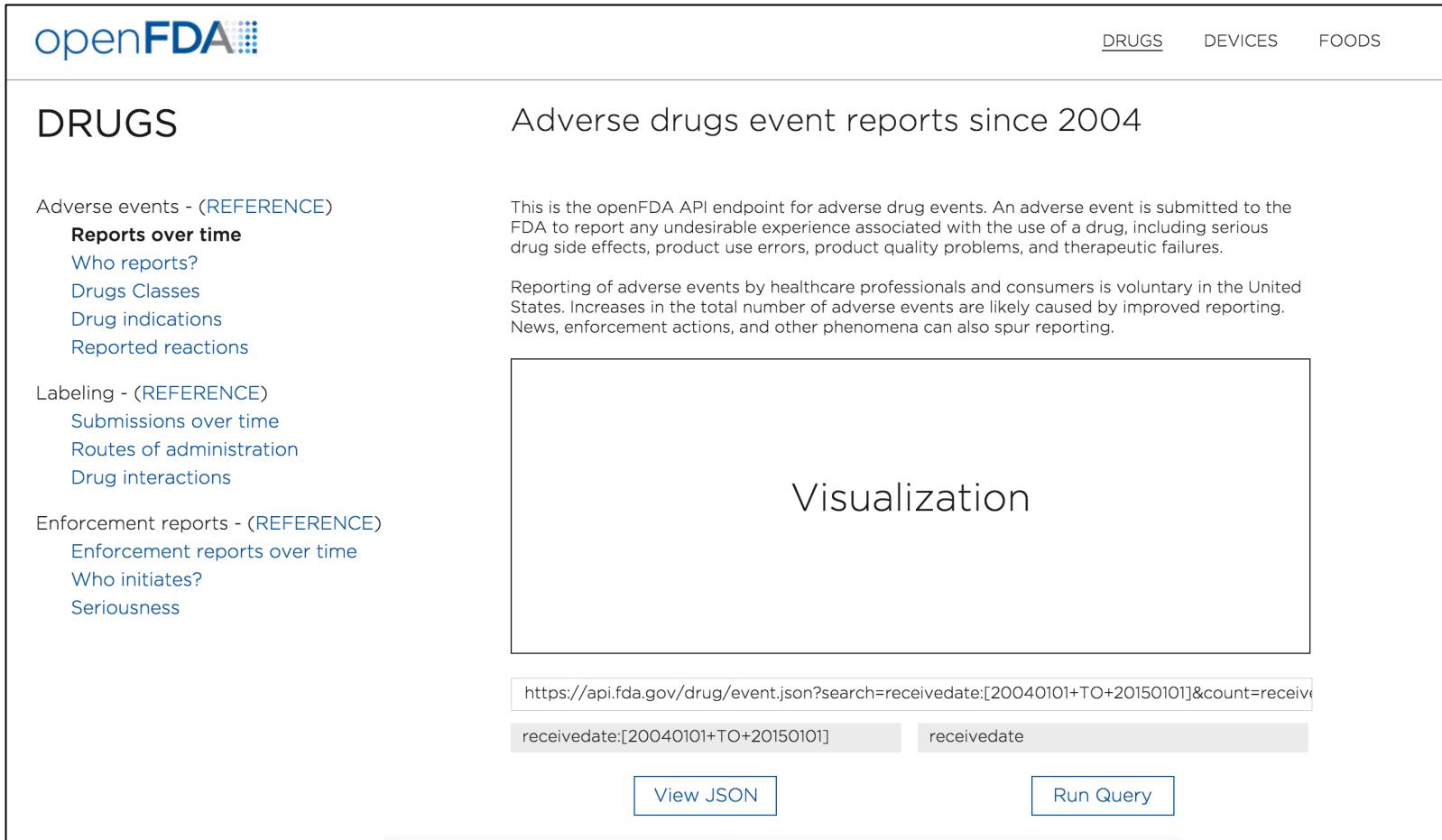
Foods

View enforcement report data for Foods



Criteria d – Use of Human Centered Design Techniques

Our Interaction Designer developed wireframes for the Drugs Subpage homepage.

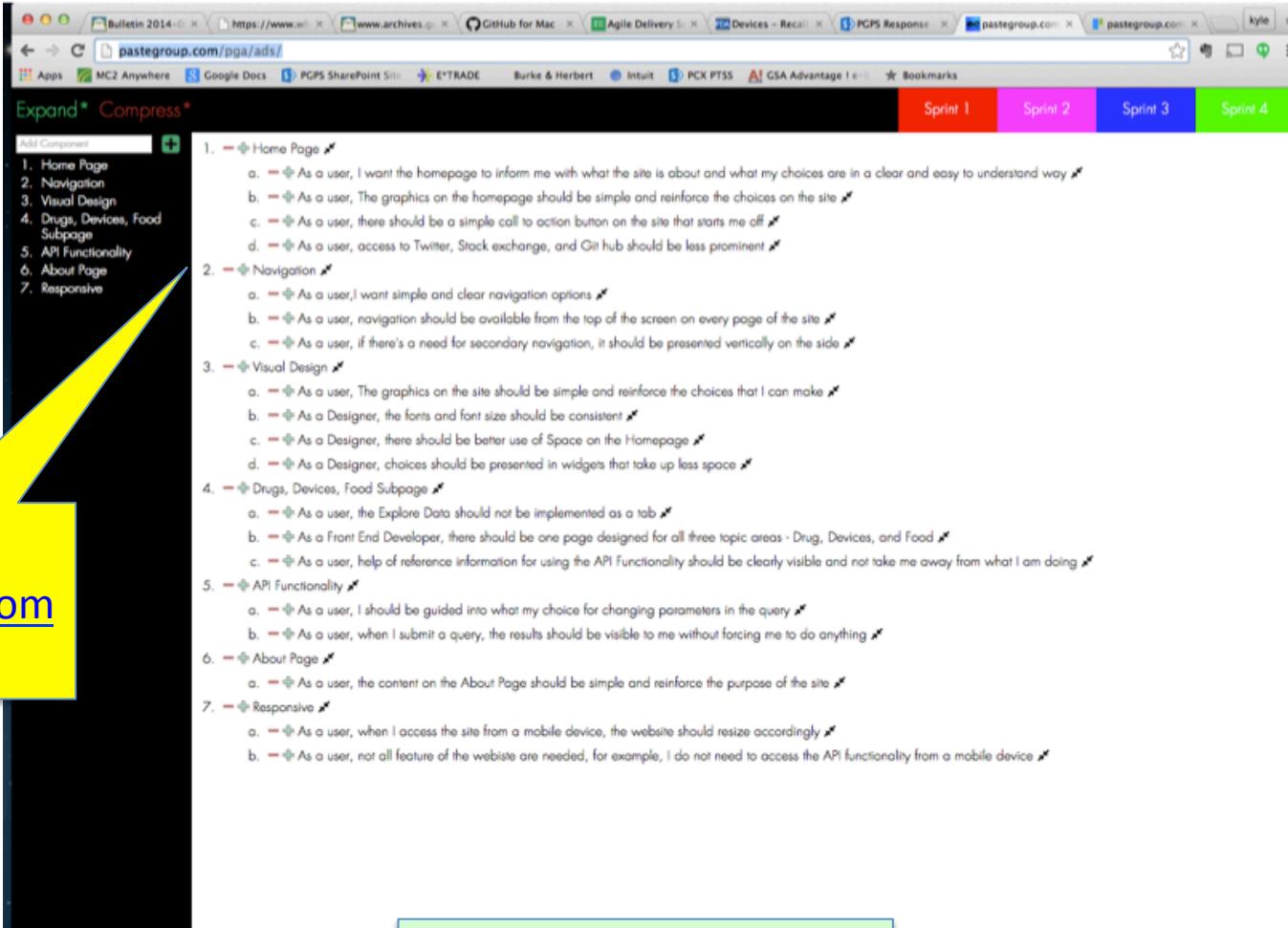


The wireframe shows a navigation bar with 'openFDA' and links for 'DRUGS', 'DEVICES', and 'FOODS'. The main content area has a 'DRUGS' sidebar with links for 'Adverse events - (REFERENCE)', 'Reports over time', 'Who reports?', 'Drugs Classes', 'Drug indications', and 'Reported reactions'. The main content area displays 'Adverse drugs event reports since 2004' with a detailed description of the endpoint and reporting trends. A large box labeled 'Visualization' is shown below the text. At the bottom, there is a URL input field containing 'https://api.fda.gov/drug/event.json?search=receivedate:[20040101+TO+20150101]&count=receive', a 'receivedate:[20040101+TO+20150101]' placeholder, a 'receivedate' placeholder, a 'View JSON' button, and a 'Run Query' button.

2 of 4 Techniques

Criteria d – Use of Human Centered Design Techniques

Users developed stories to describe their needs and put them into our PG Agile (PGA) tool to manage the Sprints and Backlog.



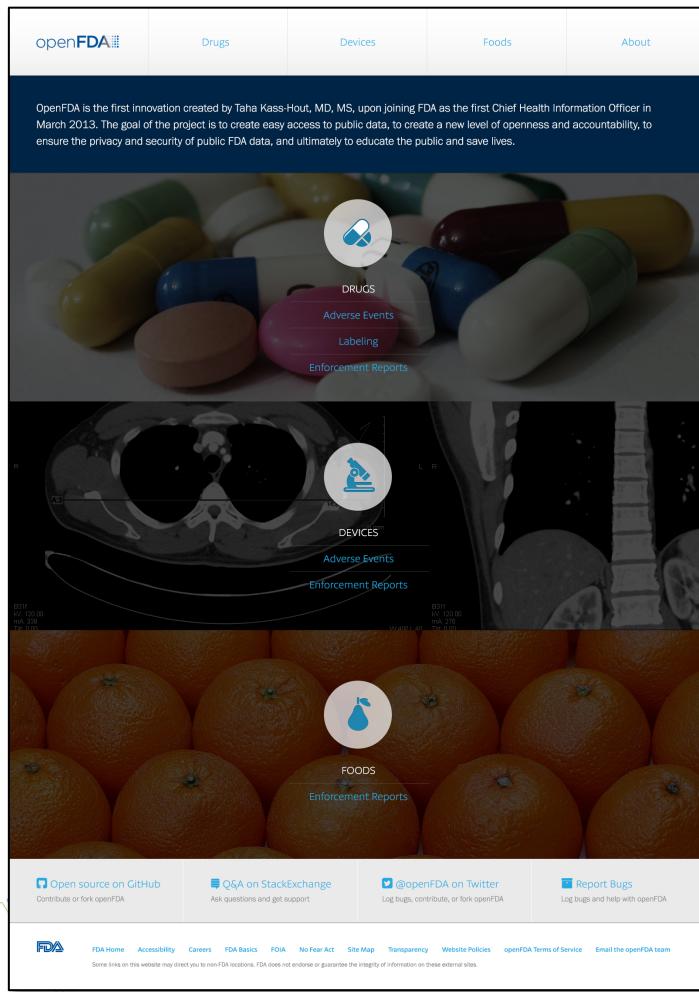
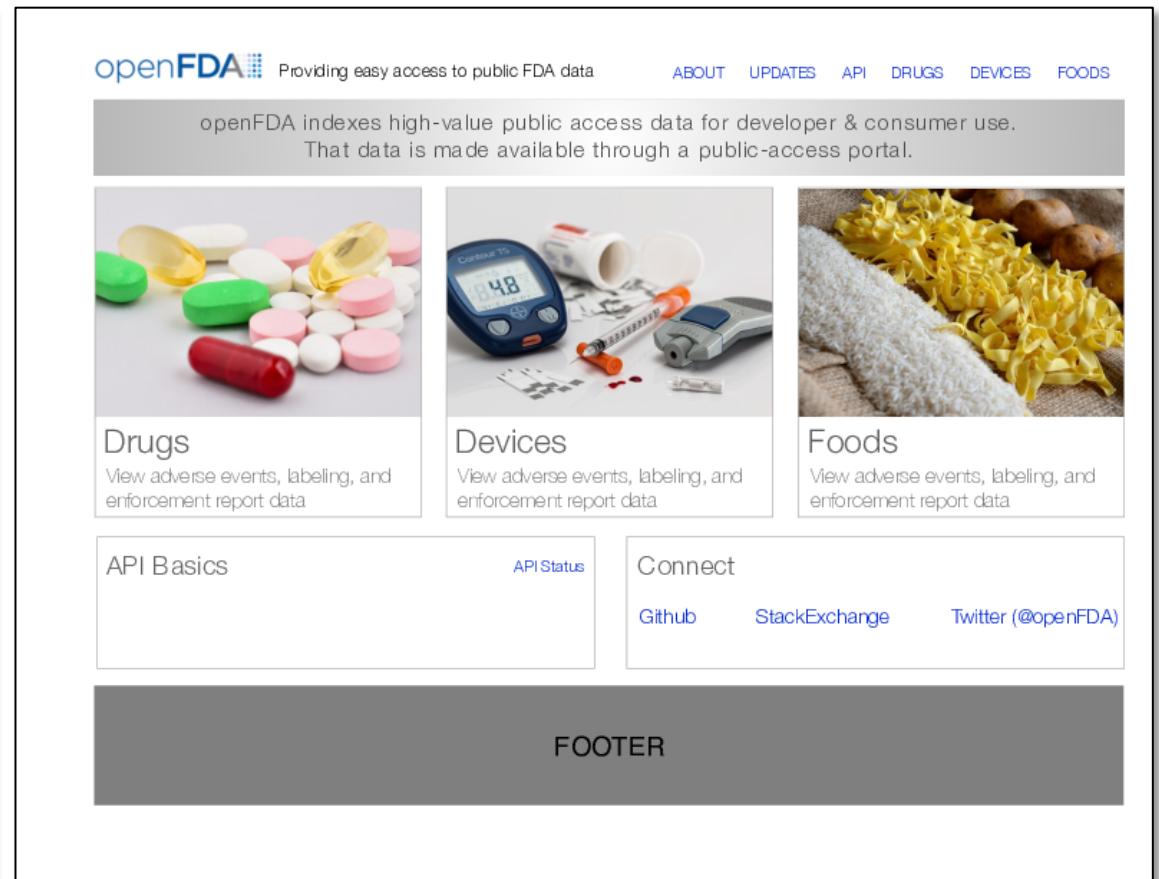
The screenshot shows a web browser window with the URL <http://pastegroup.com/pga/ads/>. The page displays a list of user stories under the heading "Expand* Compress*". The stories are organized into numbered sections (1 through 7) and further divided into sub-sections (a through d). A yellow arrow points from a yellow box containing the URL to the browser window. A green box at the bottom right contains the text "3 of 4 Techniques".

[!\[\]\(a0df4cdc6ac27fb96b0b30e4f5d366bb_img.jpg\)

15](http://pastegroup.com/pga/ads/</p>
<p>3 of 4 Techniques</p>
</div>
<div style=)

Criteria d – Use of Human Centered Design Techniques

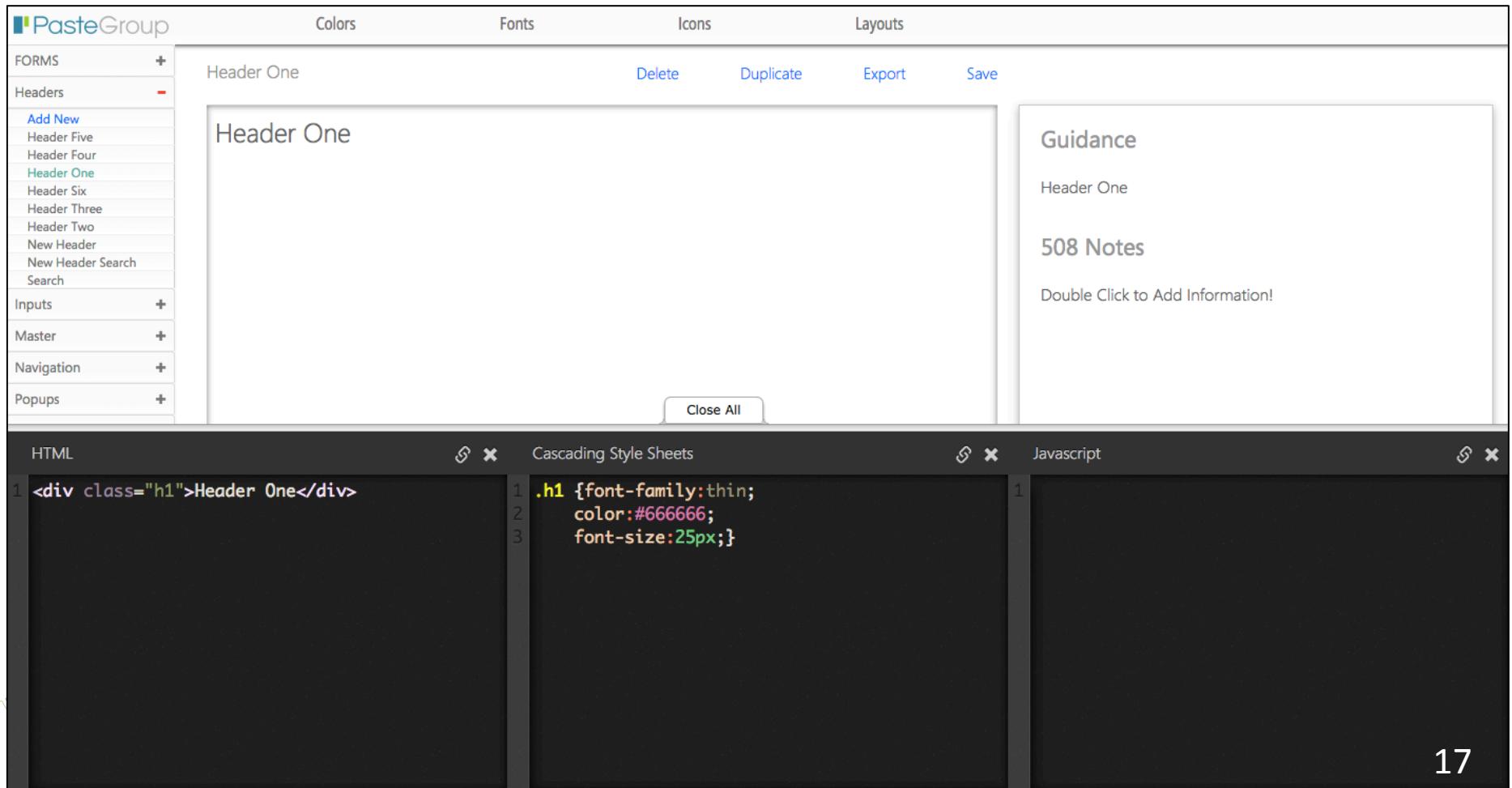
Our Visual Designer developed two visual design alternatives for our users to select elements from.

4 of 4 Techniques

Criteria e – Use of Pattern Library

Our Front-End Developer reviewed the wireframes and consulted “Frankie” our in-house pattern library to source reusable front-end code.



The screenshot shows the PasteGroup pattern library interface. On the left, a sidebar lists categories like FORMS, Headers, Inputs, Master, Navigation, and Popups. The Headers category is expanded, showing items such as Add New, Header Five, Header Four, Header One, Header Six, Header Three, Header Two, New Header, New Header Search, and Search. The main content area displays a card for "Header One". The card title is "Header One". Below the title is a large preview window containing the text "Header One". To the right of the preview are four buttons: Delete, Duplicate, Export, and Save. Further down, there's a "Guidance" section with the text "Header One" and "508 Notes", followed by the instruction "Double Click to Add Information!". At the bottom, there are three tabs: HTML, Cascading Style Sheets, and Javascript. The HTML tab shows the code <div class="h1">Header One</div>. The CSS tab shows the rule .h1 {font-family:thin; color:#666666; font-size:25px;} and the Javascript tab is currently empty.

Criteria f – Use of Modern Technology

Our Front-End Developer used HTML5, CSS3, JavaScript/jQuery in developing the prototype.

HTML5

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset='utf-8'>
    <meta http-equiv='X-UA-Compatible' content='IE=edge'>
    <title>OpenFDA</title>
    <meta name='viewport' content='width=device-width, initial-scale=1, user-scalable=no'>
    <link rel='stylesheet' type='text/css' href='font/fa.css'>
    <link rel='stylesheet' type='text/css' href='c3.css'>
    <link rel='stylesheet' type='text/css' href='style.css'>
    <link rel='icon' href='img/favicon.ico' type='image/x-icon'>
    <script src='d3.min.js'></script>
    <script src='c3.js'></script>
    <script src='jquery.js'></script>
    <script src='//use.typekit.net/jjhphy.js'></script>
    <script>try{typekit.load();}catch(e){}</script>
  </head>
  <!-- END Head -->
  <!-- START Universal JS -->
  <script type='text/javascript'>$(document).ready(function(){
    $('.navicon').click(function(){$('.navid').slideToggle()});
    $('.nav ul li a').click(function(){$('.navid').slideUp()});
    $('.chosen').css('color', 'white');
    $('.chosen').css('font-weight', '400');

    if(window.innerWidth > 1000)
    {
      var h = window.innerHeight - 70;
      $('.left').css('height', h);
    }
  });</script>
  <!-- END Universal JS -->
  <!-- START Nav HTML -->
  <div class='navicon'><div class='n1'></div><div class='n2'></div><div class='n3'></div></div>
  <ul>
    <li><a class='logo' href='index.php'><img src='img/openFDA.png'></a></li>
    <li><a class='drugs' href='drugs.php'>Drugs</a></li>
    <li><a class='devices' href='devices.php'>Devices</a></li>
    <li><a class='foods' href='foods.php'>Foods</a></li>
    <li><a class='about' href='about.php'>About</a></li>-->
  </ul>
  <a class='logorez' href='index.php'><img src='img/openFDA.png'></a>
  <div class='navid'>
    <ul>
      <li><a class='drugs' href='drugs.php'>Drugs</a></li>
      <li><a class='devices' href='devices.php'>Devices</a></li>
      <li><a class='foods' href='foods.php'>Foods</a></li>
    </ul>
    <li class='fa fa-navicon'></li>
  </div>
  <!-- END Nav HTML -->
```

CSS

```
/*grid blue = #00729f
light blue = #2e6699
dark blue = #002445*/
/*START BODY & NAV*/
body, input, section, div, span, pre, a, ul, li {font-family: "petala-pro";
  font-weight:100;
  padding:0;
  margin:0;
  text-decoration:none;
  list-style-type:none;
  -webkit-tap-highlight-color: rgba(0,0,0,0);
  -webkit-tap-highlight-color: transparent;
  color:white;
  border:1px solid #002445;
}
a, a span, a i{color:#25aaef;
  display:none;
  nav ul li a{
    width:100px;
    height:80px;
    top:0px;
    z-index:1;
    position:fixed;
    background: linear-gradient(#ffffff, #efefef);
    border: 1px solid 2px #777;
    nav ul li{
      font-size:14px;
      line-height:80px;
      text-align:center;
      width:24.3%;
      border-right:1px solid #e0e0e0;
      display:inline-block;
    }
    nav ul li:last-child{border-right:none;}
    .logo img{width:14px;
      vertical-align:middle;
      display:inline-block;
      margin-top:28px;
    }
    .navicon{position:fixed;
      right: 30px;
      width: 50px;
      height: 50px;
      z-index: 1;
      cursor: pointer;
      display:none;
    }
    .navicon div{position:fixed;
      width:25px;
      height:25px;
      right:15px;
      top:30px;
      cursor:pointer;
      background:#191919;
      z-index:3;
      margin-bottom:1px;
      border-radius:50px;
    }
    .navicon div.v2{top:37px;}
    .navicon div.v3{top:44px;}
    .navid{position:fixed;
      left:0;
      top:0px;
      height:100px;
      width:100px;
      background:white;
      z-index:1;
      border-bottom: 1px solid #adadad;
      display:none;
      border-radius:50px;
    }
    .navid ul{margin-left:30px;
      .navid ul li{line-height:50px;
        font-size:15px;
      }
    }
  }
}
```

Javascript and Jquery

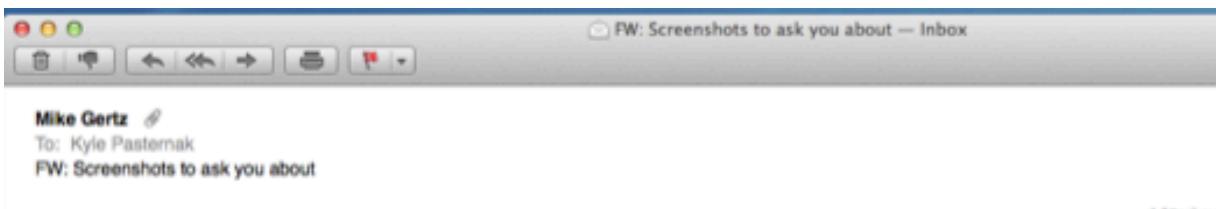
```
<script type='text/javascript'>$(document).ready(function(){
  $('.drugs').css('color', '#191919');
  $('body').css('background', 'white');

  $(window).on("resize", function () {
    var windowsize = $(this).width();
    //if (windowsize > 541 && i === 0) {
    //  location.reload();
    //}
  });
});</script></body></html>
```

- We also used (not shown)
 - php
 - D3.js
 - C3.js

Criteria g – Performed Usability Test

Below is the start of an email between our Product Manager and users discussing navigation bar options.



FYI

From: Mike Gertz [mailto:mike@pgpublicservices.com]
Sent: Friday, June 26, 2015 2:34 PM
To: Brad Ateff
Subject: RE: Screenshots to ask you about

Brad;

I was a little too close to the work to make a call on my own, so I grabbed a few people from the office (Rosalyn, Joel, and Sarah) and ran the concepts by them.

I asked them to give me their assessment of the two nav bar concepts. I told them that the site was focused on APIs to grab FDA data and then I showed them the all blue bar and asked them to tell me what they thought each of the nav links were. They got the basic idea, but were kind of hesitant.



Then I showed them the blue/orange version and two out of the three (I won't tell you which) immediately got it.



The change from blue to orange for the about page link seems to help them focus on the three main page links, so I think it's a clear winner.

Email represents results of presenting navigation bar options to users to see if differentiating the “About” link would help focus interest on the “Drugs”, “Devices”, and “Foods” links. The user group clearly felt that using a separate color for “About” helped them navigate the site.

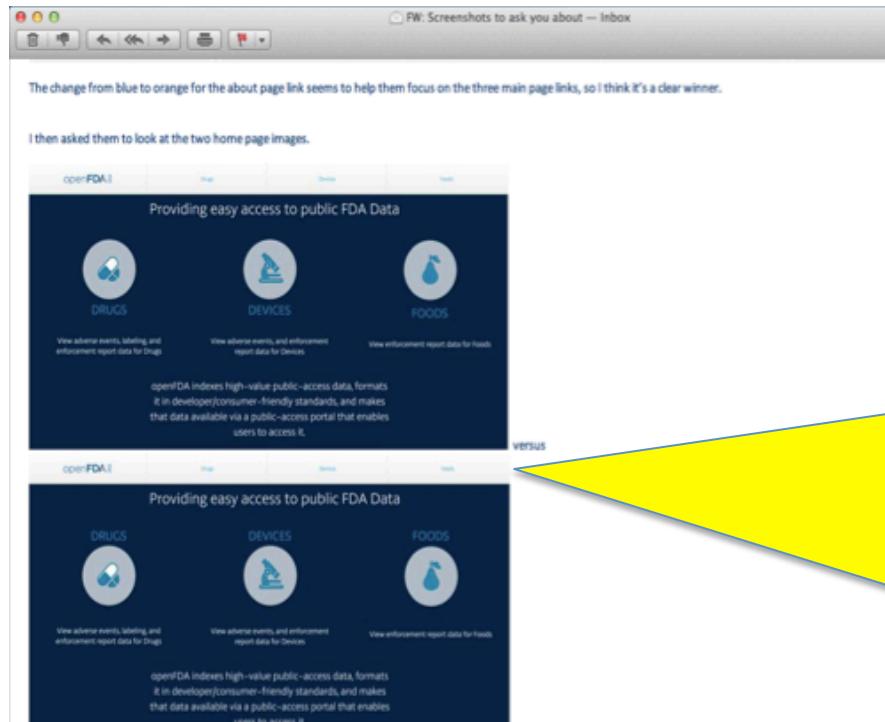


Criteria g – Performed Usability Test

The email continues showing the Product Manager and users discussing options for displaying text on the homepage.

The change from blue to orange for the about page link seems to help them focus on the three main page links, so I think it's a clear winner.

I then asked them to look at the two home page images.



versus

The feedback wasn't as dramatic here. All three thought that there wasn't a real difference between the two in terms of navigation, but all three expressed a preference for the images over text version, so I think you're on the right track here.

And just for fun, I showed them the current page. All three preferred our take, so that's a good sign, right? ☺

Mike

From: Brad Atefi [mailto:batefi@pastergroup.com]
Sent: Thursday, June 25, 2015 4:02 PM
To: Mike Gertz
Subject: Screenshots to ask you about

Questions, should we keep the about link at the top or just provide that data on the home page as we originally discussed? Also, if we do keep it should we differentiate it from the other links with an orange color?

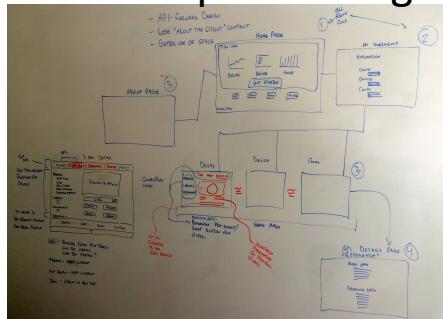
Email represents results of presenting users with the option of a page with images on top of text and vice-versa. The users felt that there was no clear differentiation in terms of navigation, however; all three expressed an esthetic preference for the images over text layout.



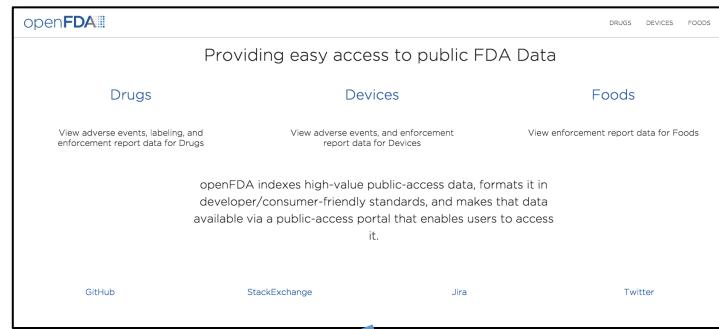
Criteria h – Used an Iterative Approach

From beginning to end our process is thoroughly iterative and always involved the users.

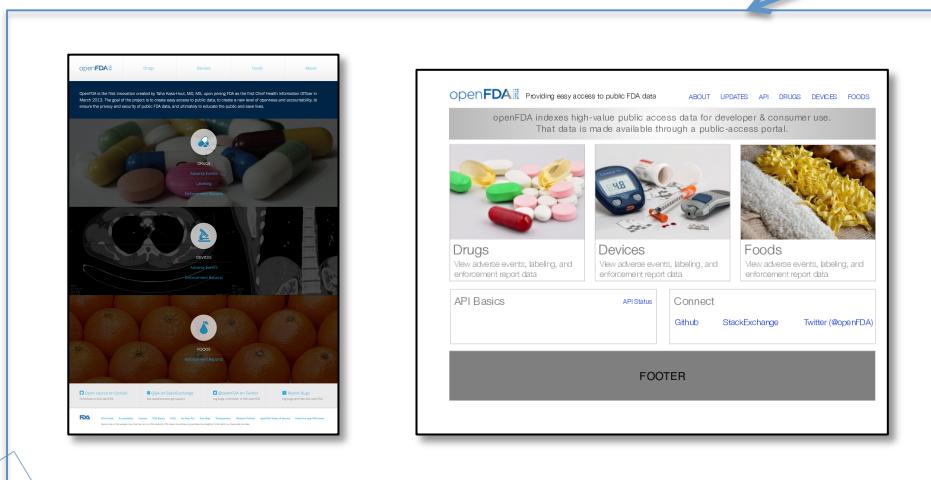
1 - Conceptual Design



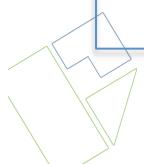
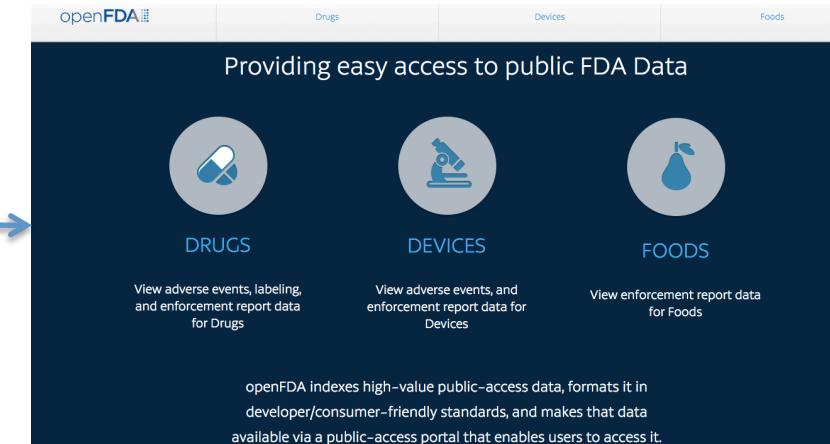
2 - Wireframes



3 – Visual Design



4 - Prototype



Criteria h – Used an Iterative Approach

Our Front End Developer regularly pushed updates to the Git repository.

<https://github.com/kpaste/ADS-OpenFDA>

```

ADS-OpenFDA - bash - 80x63
Last login: Fri Jun 26 10:41:39 on ttys001
Bahrams-MacBook-Pro:~ bah1$ cd dropbox
Bahrams-MacBook-Pro:dropbox bah1$ cd ADS-openFDA
Bahrams-MacBook-Pro:ADS-openFDA bah1$ git status
On branch master
Your branch is up-to-date with 'origin/master'.
Changes not staged for commit:
  (use "git add/rm <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

    modified:   devices.php
    modified:   drugs.php
    deleted:   font/!!!.css
    deleted:   font/black.otf
    deleted:   font/book.otf
    deleted:   font/light.otf
    deleted:   font/medium.otf
    modified:   foods.php
    modified:   head.php
    modified:   index.php
    modified:   style.css

Untracked files:
  (use "git add <file>..." to include in what will be committed)

    font/fa.css
    font/fa.eot
    font/fa.otf
    font/fa.svg
    font/fa.ttf
    font/fa.woff
    foot.php
    img/devices.png
    img/drugs.png
    img/food.png

no changes added to commit (use "git add" and/or "git commit -a")
Bahrams-MacBook-Pro:ADS-openFDA bah1$ git add .
Bahrams-MacBook-Pro:ADS-openFDA bah1$ git commit -a -m "Implemented home page designs to existing wireframe. Need 3rd round of design reviews to finalize look and feel."
error: pathspec 'a-m' did not match any file(s) known to git.
error: pathspec 'Implemented home page designs to existing wireframe. Need 3rd round of design reviews to finalize look and feel.' did not match any file(s) known to git.
Bahrams-MacBook-Pro:ADS-openFDA bah1$ git commit -a -m "Implemented home page designs to existing wireframe. Need 3rd round of design reviews to finalize look and feel."
[master b9298e8] Implemented home page designs to existing wireframe. Need 3rd round of design reviews to finalize look and feel.
 21 files changed, 700 insertions(+), 81 deletions(-)
 delete mode 100644 font/!!!.css
 delete mode 100644 font/black.otf
 delete mode 100644 font/book.otf
 create mode 100644 font/fa.css
 create mode 100644 font/fa.eot
 create mode 100644 font/fa.otf
 create mode 100644 font/fa.svg
 create mode 100644 font/fa.ttf
 create mode 100644 font/fa.woff
 delete mode 100644 font/light.otf
 delete mode 100644 font/medium.otf
 create mode 100644 foot.php

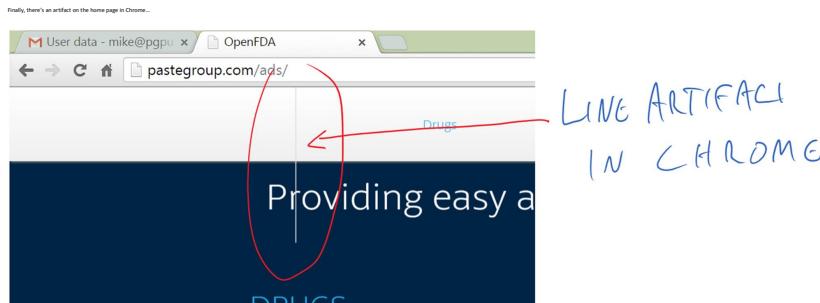
```

1 of 2 Pieces of Evidence



Criteria h – Used an Iterative Approach

During our final user acceptance tests we found changes that needed to be incorporated.



Our prototype is accessible from your desktop browser at
<http://pastegroup.com/ads>



The screenshot shows a responsive web interface for the openFDA platform. At the top, there's a navigation bar with tabs for 'Drugs', 'Devices', and 'Foods'. Below the navigation, a main title 'Providing easy access to public FDA Data' is centered. The page is divided into three main sections: 'DRUGS' (with a capsule icon), 'DEVICES' (with a microscope icon), and 'FOODS' (with a pear icon). Each section includes a brief description of the data available. A large central text block at the bottom explains the platform's purpose: 'openFDA indexes high-value public-access data, formats it in developer/consumer-friendly standards, and makes that data available via a public-access portal that enables users to access it.' There are also decorative green geometric shapes in the bottom left corner.

openFDA

Drugs Devices Foods

Providing easy access to public FDA Data

 DRUGS

View adverse events, labeling, and enforcement report data for Drugs

 DEVICES

View adverse events, and enforcement report data for Devices

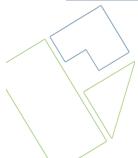
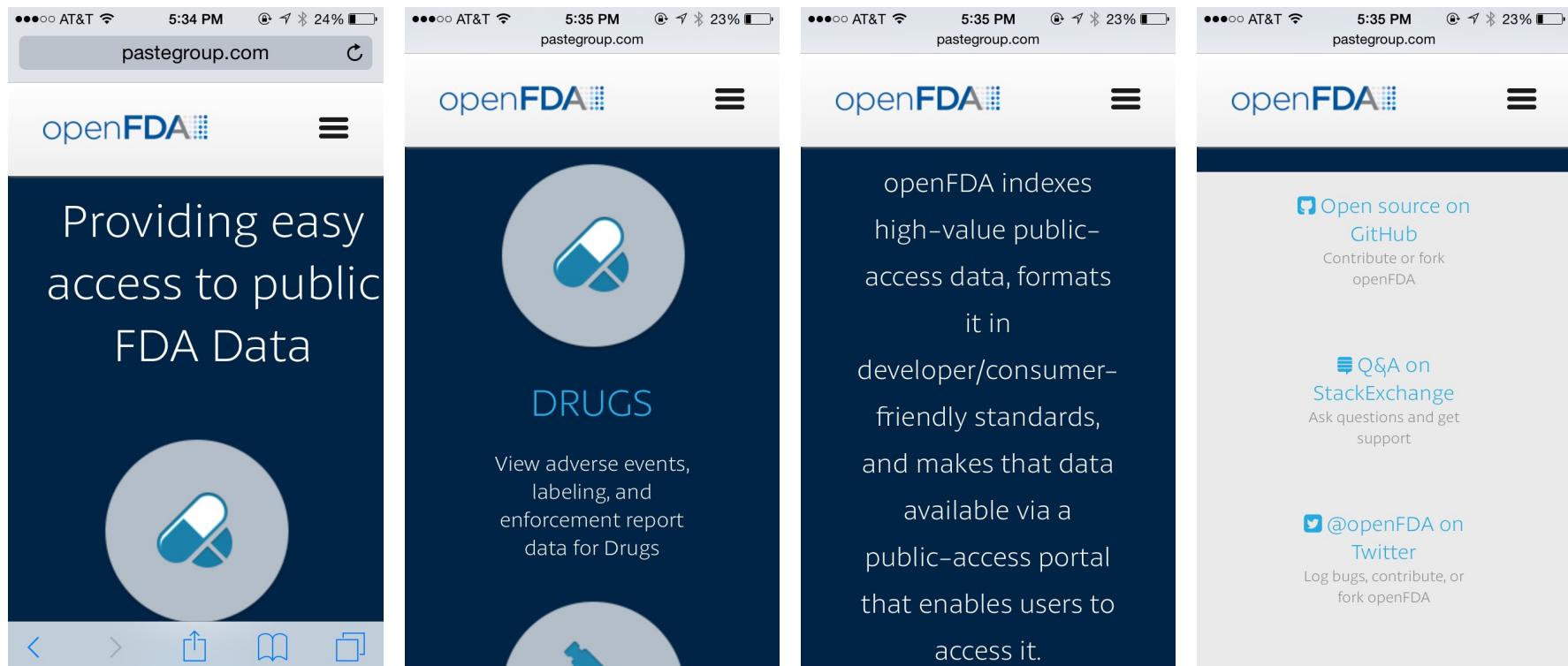
 FOODS

View enforcement report data for Foods

openFDA indexes high-value public-access data, formats it in developer/consumer-friendly standards, and makes that data available via a public-access portal that enables users to access it.

The prototype is responsive when accessed from a mobile device, <http://pastegroup.com/ads>

Sample Screen Shots of the Prototype When Accessed via a Mobile Browsers



Criteria j – Instructions to Install Elsewhere

The prototype can be installed on other machines by following these simple steps.

Option 1 Install on a PHP Web Server

1. Log into Git Hub
2. Access our public repository on Git, located at →
<https://github.com/kpaste/ADS-OpenFDA>
3. Click the Download Zip button on Git Hub page
4. Locate the zip file on your local machine's downloads folder
5. Decompress the zip file
6. Open FTP Client on your local Machine
7. Open connection to your php web server
8. Move unzipped files from local machine to your php web server using the FTP client
9. type in the url '
[http://YOURSERVER/ADS-OpenFDA/index.php'](http://YOURSERVER/ADS-OpenFDA/index.php)

Option 2 Install Locally on WAMP

- Assumes you are using a Windows Machine
1. install WAMPServer by going to
<http://www.wampserver.com/en/>
 2. Click Download
 3. choose 32bit if you are using a 32bit machine or 64bit if you are using a 64bit machine
 4. follow the instructions for installing WAMP
 5. Log into Git Hub
 6. Access our public repository on Git, located at →
<https://github.com/kpaste/ADS-OpenFDA>
 7. Click the Download Zip button on Git Hub page
 8. Locate the zip file on your local machine's downloads folder
 9. Decompress the zip file into the 'www' folder within WAMP
 10. open WAMP and run the server
 11. type in the url
[http://localhost/ADS-OpenFDA/index.php'](http://localhost/ADS-OpenFDA/index.php)



All the software used in our prototype is licensed free of charge.

- HTML5
- CSS3
- JavaScript
- jQuery
- PHP
- D3.js
- C3.js

