

# Project Greenfield

## Business Requirements Document

Version 1.0

AI Beback

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## Overview

Our outdated client-facing retail web-portal has become significantly outdated and has been proven to be hurting sales numbers. *Project Greenfield* comprises a complete redesign of the retail portal designed to address this concern and modernize the site. This document outlines the features to be implemented as part of *Project Greenfield* in its initial release. The following requirements define the new user interface required for customers to browse items in our retail catalog.

## Scope

The initial release will focus on providing the minimum viable product for our retail application. Features implemented will be constrained to the client experience which enables customers to search, browse, add to cart, and checkout. Maintenance of the catalog and internal systems are not in scope for this project. Improvements other than those to the client user interface are out of scope for this project. Specific improvements discussed and anticipated by the business team are outlined below.

In Scope	Deferred to Future Release
<ul style="list-style-type: none"><li>Item Detail pages</li><li>Performance Optimization</li></ul>	<ul style="list-style-type: none"><li>Internal portals</li><li>Catalog search improvements</li><li>Homepage and Search page</li><li>Checkout/Cart page</li></ul>

## Approvals

Role	Name	Signoff	Date
Chief Executive Officer	Adam Meway	X	6/15
Chief Technology Officer	Cy Burr	X	6/12
VP of Product	Bess Twishes	X	6/7
VP of Engineering	Bill Ding	X	6/2
Dev Team Lead	Dee Bhuger	X	6/2

## Business Requirements

### 1. Product Detail Page

The product detail page will show relevant information for a single product in the catalogue. Our catalogue is organized by *products*. One single product can be associated to many sizes and styles which each result in unique SKUs (stock keeping units). The product detail page will present items at the product level. Further breakdown by style or size will only be reflected within the product detail page.

The same product detail page will be shown for every product in the catalogue. Upon navigating to the product detail page or selecting a new product to display, the contents of the page will update to show information relevant to the selected product.

The item detail page will be comprised of distinct modules. Each module will display information related to the product being displayed. For the initial implementation, the following modules have been prioritized:

- Product Detail - Critical Priority
- Ratings & Reviews - High Priority
- Questions & Answers - High Priority
- Related Items & Outfit Creation - High Priority

#### 1.1. Overview

The Overview module will be the top-most module on the Product Detail page. The functionality contained within this module can be divided into several pieces:

1. Image gallery
2. Product information
3. Style selector
4. Add to cart

This component will guide the customer through selecting a specific style and size to add to their cart. As such, portions of the Overview module, such as the image gallery and cart selection, will be specific to a SKU chosen as opposed to the overarching product.

##### 1.1.1. Product Information

General information about the product will be displayed at the top of the Overview.

The following information will show:

1. Star Rating (# of Reviews) - Each product has an average rating based on its reviews. The average rating of the product will be represented by an array of solid or outlined stars, where the number of solid stars represents the review score. A total of 5 stars should always appear. The number of stars filled in should correspond to the average score.

The visual for rating should be representative of up to a quarter of a review point. For example, if the average is 3.8, this should display as 3¾ solid stars and 1¼ outlined stars.

Next to the star rating, a link stating “Read all [#] reviews” will show. The total number of reviews should be inserted in place of [#]. Clicking this link should scroll the page to the Ratings & Reviews module described in section 1.2.

If there are no reviews, this entire section should be hidden.

2. Product Category
3. Product Title
4. Price - The price is not actually derived from the product, but the style currently selected. It should update dynamically with the user's updates to style selected. A default style will be designated for each product. This style should appear if no further selection has been made.

The price may be on sale. If the SKU is currently discounted, then the sale price should appear in red, followed by the original price which is ~~struck through~~.
5. Product Overview - This free form text field may exist on some items. If it is available it should be displayed.
6. Share on Social media - Below the product information, buttons should provide the ability to share this product on popular social media platforms. This includes:
  - a. Facebook
  - b. Twitter
  - c. Pinterest

### **1.1.2. Style Selector**

Below the product information, the user should be presented all the styles of the product and have the ability to toggle between them. Each style should be displayed as a thumbnail.

All styles should display for the current product at all times. There is no limit to the number of styles a product can have. The thumbnails should appear in rows of 4.

The current selection should be indicated within the list by the overlay of a checkmark on top of the thumbnail for that style. Additionally, the title for that style should appear typed out in full above the thumbnail list.

A user will be able to change the selected style by clicking on the thumbnail displaying that style. Clicking on the thumbnail for the currently selected style will have no impact.

By default, the style selected will be the first in the list.

A product will always have at least one style.

Only one style can be selected at a time. A style must be selected at all times.

### **1.1.3. Add to Cart**

Below the style selector, two dropdowns should allow the user to select the size and quantity of the item to add to their cart. The options available within these dropdowns will vary based on the selected product style.

#### **1.1.3.1. Size Selector**

The first dropdown will list all of the available sizes for the currently selected style.

Only sizes that are currently in stock for the style selected should be listed. Sizes not available should not appear within the list. If there is no remaining stock for the current style, the dropdown should become inactive and read “OUT OF STOCK”.

When collapsed, the dropdown should show the currently selected size.

By default, the dropdown should show “Select Size”.

#### **1.1.3.2. Quantity Selector**

The second dropdown will allow the user to select a quantity of the current style and size to add to their cart.

The options in this dropdown will be a sequence of integers ranging from 1 to the maximum. The maximum selection will be capped by either the quantity of this style and size in stock, or a hard limit of 15. For example, if the SKU for the selected product style and size has 4 units left in stock, the dropdown will allow choice of 1, 2, 3 or 4. However if there are 30 units in stock, the dropdown will only present from 1 to 15.

If the size has not been selected, then the quantity dropdown will display ‘-’ and the dropdown will be disabled.

Once a size has been selected, the dropdown should default to 1.

#### **1.1.3.3. Add to cart**

A button labeled “Add to Cart” will appear below the size and quantity dropdowns. This button will be used to place the style, size and quantity of the product selected into the user’s cart.

Dependent on the current selection in the size and quantity dropdowns, this button will have differing functionality.

*If the default 'Select Size' is currently selected:* Clicking this button should open the size dropdown, and a message should appear above the dropdown stating "Please select size".

*If there is no stock:* This button should be hidden

*If both a valid size and valid quantity are selected:* Clicking this button will add the product to the user's cart.

#### **1.1.4. Image Gallery**

The largest piece of the Overview module will be a photo gallery showing images of the product. The photos presented in this gallery will be specific to the currently selected product style. Each time a new style is chosen, the gallery will update to show photos corresponding to the new style. Each style will have a set of images associated with it. The gallery will allow customers to browse between and zoom in on these photos.

The gallery will be viewable in two states. A default collapsed view, and an expanded view.

##### **1.1.4.1. Default View**

The default view of the image gallery will be a single main image, overlaid by the list of thumbnail images.

By default, the first image in the set will be displayed as the main image. This image will match the smaller thumbnail image shown first.

When switching between styles, the index of the image currently selected should be maintained when the gallery updates for the new style.

Clicking on any thumbnail should update the main image to match that shown in the thumbnail clicked.

The thumbnail corresponding to the image currently selected as the main image should be highlighted to indicate the current selection.

Clicking on the currently selected thumbnail will have no further effect.

Up to 7 thumbnail images will be displayed at a given time in the list.

If more than 7 images are in the set for the style selected, the user should be able to scroll forward and backwards through the thumbnails. An arrow button pointing

either direction should allow the customer to scroll through the remaining thumbnails in either direction.

Customers should also be able to change to the next or previous image in the set using forward and backwards arrow buttons appearing near the right and left edges of the image, respectively. Upon clicking the right or left arrow, the main image and the thumbnail highlighted should update.

If upon navigating to the previous or next image using the arrows, the thumbnail corresponding to the now selected image is no longer visible, then the thumbnail list should scroll similarly such that the newly selected thumbnail is visible.

If the user hovers over the main image anywhere other than the thumbnails, the left arrow, or the right arrow, the mouse icon should change to show a magnifying glass. If the user clicks on the image, the image gallery should change to the expanded view.

If the first image is selected, the left arrow should not appear. Similarly, if the last image is selected, the right arrow should not appear.

#### **1.1.4.2. Expanded View**

The expanded view of the image gallery will overlay the rest of the item detail page. Much of the same functionality on the default view will also be available on the expanded view.

The expanded view will also primarily consist of a main image. Unlike the default view, this main image will span the entire screen.

The main image will still offer right and left arrows, which will have the same function of scrolling through the image set.

In the expanded view, thumbnails will not appear over the main image. Instead, icons indicating each image in the set will appear. These icons will be much smaller, but will have the same functionality in that clicking on them will skip to that image in the set. Additionally, the icon for the currently selected image will be distinguishably different from the rest.

In the default view, clicking on the image would open the expanded view. In the expanded view, however, clicking on the main image will zoom the image by 2.5 times. Instead of displaying a magnifying glass on hover, in the expanded view the mouse should become a “+” symbol while hovering over the main image.

After clicking, the zoomed image will be too large to display in the space provided. In this case, the portion of the image shown within the window should correspond to the



current mouse position relative to the screen. For example, by moving the mouse right the portion of the zoomed image shown should pan to the right.

Furthermore, the position of the mouse relative to the centering of the zoomed image should be proportional. If the mouse is all the way in the bottom left corner of the expanded image gallery window, the bottom left corner of the zoomed image should be displayed. Moving the mouse to the top right should smoothly move the zoomed image available such until the top right of the image is displayed.

While the image is zoomed, no arrow buttons or thumbnail selection icons will be available. The mouse should display as a “-” symbol. Upon clicking the image in this state, the user should be returned to the normal expanded image gallery view.

## **1.2. Ratings & Reviews**

The Ratings & Reviews module will allow viewing and submission of reviews for the product selected. The functionality contained within this module can be divided into several pieces:

1. Write new review
2. Reviews List
3. Sorting
4. Rating Breakdown
5. Product Breakdown

This component will extend the ability to write, read, and browse through reviews for the current product.

All reviews will be saved per product. Specific styles will not be accounted for within the review module.

### **1.2.1. Reviews List**

The heart of the Ratings and Reviews module will be the list of reviews available for the user to read. This list will display all the reviews that have been submitted for the product being viewed.

The reviews within this list will be displayed on tiles of a standard size (the contents of this tile are described in section 1.2.2).

The list should display 2 tiles at a time. If there are more than 2 reviews that have been written for the given product, a button for “More Reviews” will appear below the list.

If there are 2 or fewer reviews for the given product, then the button will not appear.

Clicking this button will cause up to 2 additional reviews to appear. The list should expand, and the review tiles should show in order below the previously loaded questions.

As long as there are still unloaded reviews, the button will remain below the list. Once all of the reviews for the product have been loaded, the button should no longer appear.

After several loads, the length of the list will become very long. In order to keep the page manageable, the maximum height of the questions list should be capped such that the entire Reviews module should fit on a single screen. The reviews list should become scrollable. The sort dropdown and buttons should remain fixed outside of the scrollable list.

The order in which the reviews appear, as well as whether all or a filtered subset of the reviews appear will be changeable.

If no reviews have been submitted for this product, then the list will collapse, and the button to submit a new review (section 1.2.7) will appear near the top of the module.

**Future Enhancement** - Instead of incrementally loading 2 reviews at a time, clicking the “More Reviews” button should immediately expand the list to its maximum height. The reviews appearing within should no longer need to be explicitly loaded. Instead, the list should load in an ‘infinite scroll’, where as the user nears the end of the list, additional questions tack on to the bottom.

#### 1.2.2. Individual Review Tile

Each review will be displayed on a single tile within the list. The tile will display the following information:

1. Star Rating - This will be the rating given to the product by this individual review. The rating will be displayed in the format of solid or outlined stars, where the solid stars represent the review score. A total of 5 stars should always appear, and the amount filled in should correspond to the average score.

The visual for rating should be representative of up to a quarter of a review point. For example, if the average is 3.8, this should display as 3¾ solid stars and 1¼ outlined stars.

2. Date of review - The date the review was written should appear in the format “Month DD, YYYY”
3. Review Summary - Reviews submitted will have a one sentence summary. This single sentence will be capped at 60 characters. On the review tile, this summary will appear in **bold** font above the full review.
4. Review Body - The review body will be a free-form multimedia input where the user can submit text and images regarding their experience with the product.

The text submitted as part of the review will be between 50 and 1000 characters long.

Users should be able to submit up to 5 images along with a single review.

By default, the first 250 characters of the review should display. If the review is longer than 250 characters, below the body the a link reading “Show more” will appear. Upon clicking this link, the review tile should expand and the rest of the review should display.

Any images that were submitted as part of the review should appear as thumbnails below the review text. Upon clicking a thumbnail, the image should open in a modal window, displaying at full resolution. The only functionality available within this modal should be the ability to close the window.

5. Recommend - If the reviewer recommends buying the product, the text “I recommend this product” and a checkmark icon will display below the review. If the reviewer does not recommend the product, nothing will display here.
6. Reviewer name - The username for the reviewer will appear. Only the username will appear. No email addresses or other personal information will display. However, if the user’s email is associated to a sale in the system then next to the username the text “Verified Purchaser” will appear.
7. Response to Review - Our internal sales team has the ability to respond to any reviews written. If the review has a corresponding response, this should appear below the reviewer name. The response should be preceded by the text “Response from seller”, and should be visually distinguished from the rest of the review.
8. Rating Helpfulness - Any user on the site will have the ability to provide feedback on whether reviews are helpful. At the bottom of the review tile the text “Was this review helpful?” will precede two links “Yes (#)” and “No (#)”. Following “Yes” and “No” will be the count of users that had selected that button. Clicking either link should cast a vote for that selection.

A user on the site does not need to be logged in to provide feedback on helpfulness.

A user can provide feedback on any review. However, they can only make one submission for each review. If the user selects either “Yes” or “No” for a review, they should not be able to select another option again for that review.

### 1.2.3. Sort Options

Users will be able to change this ordering. A dropdown labeled “Sort on” will contain options on sort order.

The options within the sort drop down should include

- Helpful - This sort order will prioritize reviews that have been found helpful. The order can be found by subtracting “No” responses from “Yes” responses and sorting such that the highest score appears at the top.
- Newest - This is a straightforward sort based on the date the review was submitted. The most recent reviews should appear first.
- Relevant - Relevance will be determined by a combination of both the date that the review was submitted as well as ‘helpfulness’ feedback received. This combination should weigh the two characteristics such that recent reviews appear near the top, but do not outweigh reviews that have been found helpful. Similarly, reviews that have been helpful should appear near the top, but should yield to more recent reviews if they are older.

By default, the reviews in the list should appear in order of relevance. The dropdown should display “Relevant” as the currently selected option.

Upon selecting any of the other options, the dropdown should update to display the current selection, and the list should refresh to show the first results for that sort order.

Changing the sort order will always refresh the reviews list.

The sort selected should persist even when filters are added or removed.

### 1.2.4. Rating Breakdown (Filtering)

A breakdown of the ratings received for the product will double as the filtering options for the reviews list. This breakdown will display at the top left corner of the Rating and Reviews module.

#### 1.2.4.1. Rating summary

The top of the breakdown will simply display the average rating for the product. The rating should be displayed both as a number value as well as represented by star icons.

The number displayed should be rounded to the nearest single decimal.

The average rating of the product will be displayed in the format of solid or outlined stars, where the solid stars represents the review score. A total of 5 stars should always appear, and the amount filled in should correspond to the average score.

The visual for rating should be representative of up to a quarter of a review point. For example, if the average is 3.8, this should display as 3¾ solid stars and 1¼ outlined stars.

Additionally, the count of total reviews should be listed.

#### **1.2.4.2. Breakdown**

Below the average rating, a section titled “Rating Breakdown” will appear. Within this section, the rating distribution will be broken down.

5 bars will appear; one for each of the star ratings that a customer can give to a product. To the left of the bar, the star count will be explicitly stated in the form “# Stars”.

To the right of the bar, a label with the total number of reviews submitted with that particular rating will be shown. Only the count will show.

The bar itself will be two toned, green and grey. The portion of the bar which is green will represent the percentage of total reviews which have been submitted that have that particular star rating. For example, if a product has received 200 reviews and 150 are 5 stars, then the “5 stars” bar should be three quarters green.

The green portion of the bar should always be left of the grey portion.

If all the reviews submitted for a product are the same rating, then the bar for that star rating will be completely green and the other bars will be completely grey.

Each rating breakdown, consisting of the label, the bar, and the count, will act as a filter. Clicking on the breakdown for a star count will filter the reviews list so that only reviews of that rating display. Hovering over this breakdown will change the background color to indicate it is actionable.

The filters will be additive. If the list has already been filtered for 1 star reviews, clicking on the “2 star” breakdown will update the reviews list such that 1 and 2 star reviews are displayed.

The filters will be toggled on and off with each click. Clicking a second time on a rating breakdown will remove the filter for that rating type. If this action removes the last or only filter, then the list should return to its default state and all reviews should be shown.

Once one or more filter has been applied, a message will appear below the “Rating Breakdown” title. It will state the filters that have been currently applied. It will also include a link to “Remove all filters”. Clicking on this link will remove any filters applied and return the list to the default state.

#### **1.2.4.3. Recommendations**

The percentage of reviews that ‘recommend’ the product will be displayed below the breakdown.

### **1.2.5. Product Breakdown (Factors)**

Reviews will provide ability to give feedback on specific characteristics of the product. The characteristics include Size, Width, Comfort, Quality, Length, and Fit. One or more of these may be relevant for a product. In the Reviews module, the average feedback received will be displayed for all characteristics which apply to the product.

Feedback for characteristics will be on a 5 point scale. The range of this scale will depend on the characteristic in question. For example, Size can range from (1) “too small” to (5) “too big”, with the middle option (3) being “perfect”. Using the same 5 point scale for Quality, however, the scale would range from (1) “poor” to (5) “great”.

Regardless of what the range of the scale represents, the 5 point scale will display the same for all of the characteristics of the product. Each will appear as a grey bar similar to the rating breakdown. Above the bar, a label will state the characteristic. Below the bar, the meaning of the lowest selection (1) and the highest selection (5) will appear. On the bar, a single icon will appear representing the average value received via reviews submitted. The icon should appear horizontally from the left edge of the bar such that it represents the average input for the characteristic. For example, if the average is 5, the icon should appear all the way to the right. An average of 3 should appear in the middle.

### **1.2.6. Write New Review**

At the bottom of the Ratings & Reviews module, a button will appear allowing users to create new reviews for the product. This button should always be available on any product page.

Upon clicking the button a modal window should open, overlaying the product page. The modal should be titled “Write Your Review” and subtitled “About the [Product Name Here]”. The product name should be inserted into the subtitle.

The following inputs should appear on the review form. Each should be labelled as titled below. Those indicated as mandatory should have an asterisk next to the title.

#### **1.2.7.1. Overall rating (mandatory)**

The overall rating will be selected via five selectable star icons. Initially, the stars will all be outlines, and none will be solid. Clicking on a star will fill that star and all of the stars to the left of it with solid color. Customers will not be able to select fractions of a star. After selecting a star, text will appear to the right of the stars explaining the meaning of the selection. The text will vary as follows:

- 1 star - “Poor”
- 2 stars - “Fair”
- 3 stars - “Average”
- 4 stars - “Good”

5 stars - "Great"

#### 1.2.7.2. Do you recommend this product? (mandatory)

Recommendation will be captured via a radio button array of "Yes" and "No". Default radio button behavior will apply.

#### 1.2.7.3. Characteristics (mandatory)

Any characteristics designated as applicable for the current product will appear in this area. For these inputs, the title will be the characteristic title.

This input will appear as an array of five radio buttons. The meaning of the lowest (1) and highest (5) selection will appear below the array of radio buttons.

By default, no button will be selected.

Above the five buttons, the meaning of the current selection will be explicitly presented. The default will be "none selected". After making a selection, this should update as applicable for the given characteristic. The meaning of the selections is outlined below:

	1	2	3	4	5
<b>Size</b>	A size too small	½ a size too small	Perfect	½ a size too big	A size too wide
<b>Width</b>	Too narrow	Slightly narrow	Perfect	Slightly wide	Too wide
<b>Comfort</b>	Uncomfortable	Slightly uncomfortable	Ok	Comfortable	Perfect
<b>Quality</b>	Poor	Below average	What I expected	Pretty great	Perfect
<b>Length</b>	Runs Short	Runs slightly short	Perfect	Runs slightly long	Runs long
<b>Fit</b>	Runs tight	Runs slightly tight	Perfect	Runs slightly long	Runs long

#### 1.2.7.4. Review summary

A text input allowing up to 60 characters.

Placeholder text should read: "Example: Best purchase ever!"

#### 1.2.7.5. Review body (mandatory)

A text input allowing up to 1000 characters.

Placeholder text should read: "Why did you like the product or not?"

The review must be over 50 characters long in order to be submitted. If the user tries to submit a review shorter than 50 characters, then the submission should fail in the same manner as it would for a blank mandatory field.

Below the input for the Review body, a counter should appear. This counter should let the user know how many characters are needed to reach the 50 character minimum. It should appear in the format “Minimum required characters left: [##]”. As the user types, the count of characters should update. After the user reaches 50 characters, the counter should be replaced by a message stating “Minimum reached”.

#### **1.2.7.6. Upload your photos**

A button will appear allowing users to upload their photos to the form.

Clicking the button should open a separate window where the photo to be can be selected.

After the first image is uploaded, a thumbnail showing the image should appear. A user should be able to add up to five images before the button to add disappears, preventing further additions.

#### **1.2.7.7. What is your nickname (mandatory)**

A text input allowing up to 60 characters for the user’s display name.

Placeholder text should read: “Example: jackson11!”.

Below this field, the text “For privacy reasons, do not use your full name or email address” will appear.

#### **1.2.7.8. Your email (mandatory)**

A text input allowing up to 60 characters.

Placeholder text should read: “Example: jackson11@email.com”.

Below this field, the text “For authentication reasons, you will not be emailed” will appear.

#### **1.2.7.9. Submit review (button)**

A button by which the review can be submitted.

Upon selecting this button the form’s inputs should be validated. If there are any invalid entries, the submission should be prevented, and a warning message will appear. This message should be titled “You must enter the following:”

This error will occur if:

- Any mandatory fields are blank
- The review body is less than 50 characters
- The email address provided is not in correct email format
- The images selected are invalid or unable to be uploaded.



### 1.2.7. Keyword search - Low Priority

Above the reviews list, a search bar will allow the user to filter the reviews for any that contain text matching the search term.

After the user types 3 or more characters into the search bar the results will begin to filter to only those containing matching text. The filter should continue to update as the user adds or removes characters.

If the user clears the search term, or removes characters so that less than 3 remain, the list should return to the state where it is not filtered to matching text.

The search filter should work with any other filters or sorts that have been applied, and narrow the results further. Changes to the sort and rating filters should not remove the search term filter.

**Future Enhancement** - If time allows, any matching text within the reviews should be highlighted as the search term changes and the list is filtered down. The text should appear in the normal black font, surrounded by a yellow highlight. This should only occur after 3 characters are entered, and the list results have been updated.

## 1.3. Questions & Answers

The Questions & Answers module will allow asking and answering of questions for the product selected. The functionality contained within this module can be divided into several pieces:

1. View questions
2. Search for a question
3. Asking a question
4. Answering a question

This component will extend the ability to view and search questions, ask questions, answer questions and provide feedback on questions about the current product.

All questions will be asked and answered per product. Specific styles will not be accounted for within the Questions & Answers module.

### 1.3.1. Questions List

At the center of the Questions and Answers module will be a list of questions that have been asked about the given product.

The questions and their corresponding answers within this list will be displayed in an expanding and collapsing accordion. By default, on page load up to four questions should be displayed. Up to two answers should display for each question. The

remaining questions or answers should be hidden until the user loads them using the “More Answered Questions” button (section 1.3.4).

Questions should appear in order of ‘helpfulness’, corresponding to how many users have indicated that the question was helpful.

The list will contain all questions by default, but will have the potential to be filtered to a subset based on user searches (section 1.3.3).

If no questions have been submitted for this product, then the list will collapse, and the button to submit a new question (section 1.3.5) will appear near the top of the module.

### 1.3.2. Individual Question

Each question within the list will offer the same information and set of features.

#### 1.3.2.1. Question

The question itself will display at the top, preceded by the text “Q:”

#### 1.3.2.2. Answers List

A list of answers will appear below the question. The entire answer list will be titled “A:”.

Each answer will start on a new line, where the text body of the answer will display.

Below the answer, the username of the answerer and the date the answer was written will show in the format “by [username], Month DD, YYYY”. If the answer is from the seller, then the username should display “**Seller**” in bold.

A link should appear next to the text “Helpful?” reading “Yes (#)” with the count of selections for that answer. Clicking on this link should increase the count for that response. A customer should not be able to vote more than once for this selection.

Next to the link for “Helpful?”, a second link reading “Report” will appear. Clicking on this link will mark the answer for internal review. A user should not be able to report an answer more than once. After clicking on this link, the “Report” link should change to static text that reads “Reported”. Answers that have been reported should be marked as such in the system for further action to be taken.

Answers should appear in the order of ‘helpfulness’. However, any answers from the seller should appear at the top of the list. There should be no other sort order for answers.

By default only two answers will show. The rest should be hidden. If more than two answers exist for the question, a link to “See more answers” should display below the list. Clicking on this link should expand the area below the question and display the remainder of the list.

The view for the full list of answers should be confined to half of the screen, and the list within should be scrollable. When expanded, the button to “See more answers” should change to read “Collapse answers”.

**Future Enhancement** - If time allows, answers should have the capability of supporting image uploads. If an answer submitted includes images, thumbnail images for each image submitted should appear below the answer text body, above the username and other metadata.

Each image thumbnail should be clickable. Upon clicking the thumbnail, a modal window expanding the image at full resolution should appear over the page. The only functionality within this modal window should be an “X” icon through which the user can close out of the modal.

#### **1.3.2.3. Was this question helpful**

Text asking “Helpful?”, should appear in line with the question, followed by a link reading “Yes (#)” with the count of selections for that answer. Clicking on this link should increase the count for that question. A customer should not be able to vote more than once for this selection.

#### **1.3.2.4. Add an answer**

Another link should appear next in line with each question titled “Add Answer”. Clicking on this link should open up a modal window containing a form through which answers can be submitted. The details for this modal and answer submission are outlined in section 1.3.6.

### **1.3.3. Search Questions**

A search bar will appear above the questions list. Search terms entered in this text input will filter the list for matching results.

After the user types 3 or more characters into the search bar the results will begin to filter to only those containing matching text. The filter should continue to update as the user adds or removes characters.

The bar should display placeholder text reading “Have a question? Search for answers...”

If the user clears the search term, or removes characters so that less than 3 remain, the list should return to the state where it is not filtered to matching text.

The search filter should work with any other filters or sorts that have been applied, and narrow the results further. Changes to the sort and rating filters should not remove the search term filter.

**Future Enhancement** - If time allows, any matching text within the reviews should be highlighted as the search term changes and the list is filtered down. The text should appear in the normal black font, surrounded by a yellow highlight. This should only occur after 3 characters are entered, and the list results have been updated.

#### **1.3.4. More Answered Questions**

The list will by default only display up to 2 questions asked. If there are more than 2 questions that have been asked for the given product, a button for “More Answered Questions” will appear below the list.

If there are 2 or less questions for the given product, then the button will not appear.

Clicking this button will cause up to 2 additional questions to appear. The list should expand, and the questions should show in order below the previously loaded questions.

As long as there are still unloaded questions, the button will remain below the list. Once all of the questions for the product have been loaded, the button should no longer appear.

After several loads, the length of the list will become very long. In order to keep the page manageable, the maximum height of the questions list should be capped such that the entire Questions & Answers module should fit on a single screen. The questions list should become scrollable. The search bar and buttons should remain fixed outside of the scrollable list.

**Future Enhancement** - Instead of incrementally loading 2 questions at a time, clicking the “More Answered Questions” button should immediately expand the list to its maximum height. The Questions appearing within should no longer need to be explicitly loaded. Instead, the list should load in an ‘infinite scroll’, where as the user nears the end of the list, additional questions tack on to the bottom.

#### **1.3.5. Add a Question**

At the bottom of the Questions & Answers module, a button will appear allowing users to create a new question for the product. This button should always be available on any product page.

Upon clicking the button a modal window should open, overlaying the product page. The modal should be titled “Ask Your Question” and subtitled “About the [Product Name Here]”. The product name should be inserted into the subtitle.

The following inputs should appear on the question form. Each should be labelled as titled below. Those indicated as mandatory should have an asterisk next to the title.

##### **1.3.5.1. Your Question (mandatory)**

This text input should be a large text window allowing up to 1000 characters.

**1.3.5.2. What is your nickname (mandatory)**

A text input allowing up to 60 characters for the user's display name.

Placeholder text should read: "Example: jackson11!".

Below this field, the text "For privacy reasons, do not use your full name or email address" will appear.

**1.3.5.3. Your email (mandatory)**

A text input allowing up to 60 characters.

Placeholder text should read: "Why did you like the product or not?".

Below this field, the text "For authentication reasons, you will not be emailed" will appear.

**1.3.5.4. Submit question (button)**

A button by which the question can be submitted.

Upon selecting this button the form's inputs should be validated. If there are any invalid entries, the submission should be prevented, and a warning message will appear. This message should be titled "You must enter the following:"

This error will occur if :

1. Any mandatory fields are blank
2. The email address provided is not in correct email format

**1.3.6. Add an Answer Modal**

Through the link provided on each question within the Questions list, users will be allowed to submit an answer for the product.

Upon clicking the button a modal window should open, overlaying the product page. The modal should be titled "Submit your Answer". The modal should be subtitled: "[Product Name]: [Question Body]". The appropriate product name and question body should be inserted into the subtitle.

The following inputs should appear on the question form. Each should be labelled as titled below. Those indicated as mandatory should have an asterisk next to the title.

**1.3.6.1. Your Answer (mandatory)**

This text input should be a large text window allowing up to 1000 characters.

**1.3.6.2. What is your nickname (mandatory)**

A text input allowing up to 60 characters for the user's display name.

Placeholder text should read: "Example: jack543!".

Below this field, the text “For privacy reasons, do not use your full name or email address” will appear.

#### **1.3.6.3. Your email (mandatory)**

A text input allowing up to 60 characters.

Placeholder text should read: “Example: jack@email.com”.

Below this field, the text “For authentication reasons, you will not be emailed” will appear.

#### **1.3.6.4. Upload your photos**

A button will appear allowing users to upload their photos to the form. Up to five photos should be allowed for each answer.

Clicking the button should open a separate window where the photo to be can be selected.

After the first image is uploaded, a thumbnail showing the image should appear. A user should be able to add up to five images before the button to add disappears, preventing further additions.

#### **1.3.6.5. Submit answer (button)**

A button by which the answer can be submitted.

Upon selecting this button the form’s inputs should be validated. If there are any invalid entries, the submission should be prevented, and a warning message will appear. This message should be titled “You must enter the following:”

This error will occur if:

1. Any mandatory fields are blank
2. The email address provided is not in correct email format
3. The images selected are invalid or unable to be uploaded.

### **1.4. Related Items & Comparison**

The Related Items & Comparison module will display two sets of related products. The first set will be a list of products, determined internally, that are related to the product currently being viewed. The second set will be a list, custom created by the user, of products which the user has grouped with the current product into an ‘outfit’.

#### **1.4.1. Related Product Cards**

The related product lists will be comprised of cards. Each card will display the information for a single product.

The card itself will be clickable. Clicking the card will navigate to the detail page for that product.

#### 1.4.1.1. Product Information

The following information will appear on the card. This information will all be read-only and will not have any interactivity associated.

1. Product Category
2. Product Name
3. Price - As the price is not actually derived from the product, the price displayed should be that for the default style. Sale prices should be reflected. If the style is currently discounted, then the sale price should appear in red, followed by the original price which is struckthrough.
4. Star Rating (# of Reviews) - Each product has an average rating based on its reviews. The average rating of the product will be displayed in the format of solid or outlined stars, where the solid stars represents the review score. A total of 5 stars should always appear, and the amount filled in should correspond to the average score.

The visual for rating should be representative of up to a quarter of a review point. For example, if the average is 3.8, this should display as 3¾ solid stars and 1¼ outlined stars. If there are no reviews, this entire section should be hidden.

#### 1.4.1.2. Product Preview Images

The product card should display preview images of the related products. The images which appear on the product card should be the same that appear in the Overview module on the item detail page for that product.

By default, the preview image displayed on each card will be the primary image for that product. This should be the same which first appears on the image detail page's image gallery.

**Future Enhancement** - In addition to only being able to load the primary image, users should be able to scroll through additional images associated to a related product.

Upon hovering over the initial preview image that appears on the card, a carousel of thumbnail images should appear allowing the user to view additional preview images. The carousel will be a row of thumbnails which overlays the bottom portion of the preview image, covering part of the image when hovered. The list should disappear when the user is no longer hovering on the card.

Four thumbnail images should appear in the carousel at any given time. The carousel should extend the ability to scroll left/right through the list via left and right arrows such that all images for that product can be selected and viewed.

Clicking on a thumbnail should change the preview image to display the image clicked. The selection of a different image should persist even after no longer hovering over this card.

Clicking on the preview image, and anywhere on the card other than a thumbnail image carousel, will continue to navigate the user to that product's detail page.

#### **1.4.1.3. Action button**

A button will appear on the top right corner of each product card. This button will trigger different functionality depending on which list, Related Products or Your Outfit, the card appears within. The button will also display a different value depending on which list the card appears within.

### **1.4.2. List Behavior**

Related product lists will be shown as a list of product cards displayed in a carousel fashion scrolling horizontally.

The number of related products will be finite. All of the related products should be present in the list. Due to screen limitations, any product cards that do not fit on screen initially, should appear offscreen in the carousel. On initial load, the list should be centered such that the first related product is all the way on the left hand side of the screen.

In order to navigate through and view the rest of the list, arrows will appear on the right and left hand edges of the list. Clicking the left and right arrow will scroll through the list displaying previous and subsequent cards in the list, respectively. Clicking on the arrow should only scroll through the list one product at a time.

When the first card is all the way on the left of the screen, and no previous cards exist to display, the left arrow should be hidden. This will be the case on initial page load. Similarly, when the last card appears on the far right of the list, the right arrow will be hidden.

### **1.4.3. Related Products List**

The first list for related products will be the same for every customer. It will display products which have been associated to the current product by the company. This list will be determined internally.

User interactions will not change the list. The related products list will be the same each time the product is loaded.

#### **1.4.3.1. Action button**



The action button on cards within the Related Products list will appear as a star icon. The button will open a modal window comparing the details of the product of the current page to those of the product that was selected from the list.

#### 1.4.3.2. Comparison Modal

The comparison modal window will pull up and compare the characteristics present for each product. The modal should be titled “Comparing”. The characteristics to be compared are the same as those which appear on the Overview module for each product separately.

In the comparison modal, all characteristics for both products will be combined and reconciled against one another. These characteristics should appear in a table format with the first column representing the product for the current page, the second displaying the characteristic, and the third representing the product to be compared.

Current Product Name		Compared Product Name
Current Product Value	Characteristic	Compared Product Value

Each characteristic should appear on its own line. These characteristics can either be facts regarding the product or values for which the product has a specific quantity. If the characteristic has a specific value it should display. If the characteristic is a fact such that it is ‘true’ for the given product, then the value should display as a checkmark. For any characteristics that do not apply to the product, the value should simply be left blank.

All characteristics should appear in the modal. If the products have no overlapping characteristics listed, then all should appear, but no single characteristic row would have a value for both products.

If the length of the comparison table is too long to display on the modal, the table should become scrollable. In this scenario, the product names should remain fixed atop the list.

#### 1.4.4. Your Outfit List

A second list of products will appear below the standard Related Products section. It will contain products which the user has selected to group together as an outfit. This list will have the same format as the related products section, and will display the same product cards in a carousel like list. This list will be titled “Your Outfit”.

Unlike the related products list that appears first, the products which appear in this list will not be determined internally, but will be unique to each user. Items will be added to the list only when a user explicitly selects them to be added.

Also unlike the related products list, the first card that appears on the left hand side of the list should not contain a product. Instead the card should display a '+' icon and read "Add to Outfit". This card will act as a button that adds the currently viewed product to the outfit list.

By default, this list should contain no products within it.

Additions will impact individual customers specifically. A selection one customer makes will not impact any other customers.

A product can only be added to an outfit once. While the card to "Add to Outfit" should remain visible, clicking it will not add the item a second time. There is no maximum on the number of items a user may add to their outfit.

Each customer will have one outfit list. This list will be the same regardless of which product detail page they are viewing. Therefore, the list items should persist across page navigation.

The list should persist for each customer even if they exit the website and return at a later time.

#### 1.4.4.1. Action button

The action button on cards within the Related Products list will appear as an 'X' icon. The button will remove the product from the Outfit list.

## Constraints

1. MVP must be deployed
2. Funding has been allocated for three (3) weeks of development time
3. The engineering team can consist of no more than four (4) software developers
4. Project Greenfield must utilize existing technical infrastructure, which cannot be modified
5. Only dependencies which have been whitelisted by our Web Security team can be utilized. Please check the list of [whitelisted open-source dependencies](#).
6. The MVP must comply with Accessibility standards.

## Quality Control and SLAs

Page performance of the new web-portal should be equivalent to or greater than the legacy site.

- Time to First Paint: 0.5 seconds
- Time to First Meaningful Paint: 2.0 seconds
- Time to Interactive: 2.5 seconds

## Summary of Work

1. **Overview** [ Product Info, Style Selector, Image Gallery ]
2. **Ratings and Reviews** [ Write new Review, Rating Breakdown, Product Breakdown, Reviews List, Sorting, Keyword Search ]
3. **Questions and Answers** [ Question List, Search Questions, Add a Question, Add an Answer ]
4. **Related Items and Comparison** [ Related Products Card, List Behavior, Related Products List, Your Outfit List ]