Website Name	Balenciaga
Website URL	https://www.balenciaga.com/en-us
Updated Prototype Site URL	https://3g0puc.axshare.com/

Executive Summary

The usability study conducted on the Balenciaga website aimed to identify and address common usability issues encountered in the luxury e-commerce platform. Through a thorough analysis, several key findings were identified, each accompanied by proposed solutions to enhance user experience and streamline the purchasing process.

Task 1 findings focused on improving interactions related to adding items to the cart and inclusion of the "Shop the Look" feature for convenient purchasing. Additionally, aesthetic enhancements were suggested for the menu design to improve visual appeal and navigation clarity.

Task 2 findings highlighted the importance of case sensitivity in the search bar text and the introduction of a "Customers Also Bought" feature to facilitate product discovery and increase user engagement. Consistency in cart visibility was also addressed to provide users with clear visibility and maintain consistency.

Task 3 findings emphasized the significance of simplifying the feedback process to encourage user engagement and improve communication between users and website administrators.

By implementing the proposed solutions, such as introducing easy-to-use controls, including features like "Shop the Look" and "Customers Also Bought," and streamlining feedback processes, the Balenciaga website can significantly improve usability, enhance user satisfaction, and align with industry best practices in luxury e-commerce.

Methodology and Task Analysis

Who we tested

Twelve participants, having the following demographic characteristics, evaluated Balenciaga Website.

Age

Under 18	1
18-24	5
25-34	6
TOTAL (participants)	**12**

Online Shopping Habits

Rarely (once a year or less)	1
Occasionally (a few times a year)	5
Sometimes (once a month)	4
Often (a few times a month)	1
Very often (once a week or more)	1
TOTAL (participants)	**12**

Educational Background

Undergraduate	2
Postgraduate	10
TOTAL (participants)	**12**

Gender

Women	4
Men	8
TOTAL (participants)	**12**

Other questions that were asked in the demographic survey were about Undergraduate/Postgraduate major, Occupation, Ethnicity/Race, if the participant has previously visited/shopped on this site. All the participants of the study are of Asian/Pacific Islander origin.

The distribution of participants across demographic categories such as age, online shopping habits, educational background, gender, and ethnicity/race could introduce various biases into the study. For instance, the disproportionate representation of certain age groups, educational backgrounds, or genders may result in sampling bias, where the sample does not accurately reflect the diversity of the population.

Additionally, cultural bias may arise due to the homogeneity of the participants' ethnic and racial backgrounds, potentially limiting the generalizability of the findings to more diverse populations. Moreover, selection bias may occur if certain individuals are more likely to participate based on their characteristics, such as their online shopping habits or educational background, leading to skewed results that may not accurately represent the broader population. Overall, the uneven distribution of participants across demographic categories underscores the importance of carefully considering and mitigating biases in research design and interpretation.

What participants did

Task 1: Adding Items to Cart

- Scenario: Imagine you're purchasing products from the website.
- Instructions:
    - Navigate to Women's Ready to Wear Section > Coats and Jackets.
    - Find and add the following items to your cart:
        - Women’s Fitted Cocoon Trench in black, Size - 36, Quantity - 1
        - Black Bag with silver hardware featured by the model in the product, Quantity - 2

        - Black Sunglasses featured by the model in the product, Quantity - 1
        - Black Hoodie with zip featured by the model in the product, Size - M/2, Quantity - 1
        - Pant featured by the model in the product, Size - S/36, Quantity - 1

Task 2: Add item and another item that complements it

- Instructions:
    - Use the search functionality on the home page to find "Women's Balenciaga Wrap Shirt Large Fit in White."
    - Add it to your cart.
    - Now, find a pair of pants that complement the shirt i.e add "Denim Size Sticker Baggy Pants in blue" to your cart, Size - S, Quantity - 1.

Task 3: Feedback

- Instructions:
    - Go to the home page and provide feedback about the website/prototype you used for the previous tasks.

The task starts when the participant moves the website to perform it after reading and comprehending the instructions. The task ends when the instructions provided in the tasks are clearly fulfilled.

Participants / Tasks	Task 1			Task 2			Task 3			Total Task Time
	Start Time	End Time	Task Time	Start Time	End Time	Task Time	Start Time	End Time	Task Time	
Participant 1	03:27	11:22	07:55	12:25	13:38	01:13	14:10	14:47	00:37	09:45
Participant 2	03:35	16:14	12:39	18:40	21:09	02:29	21:48	22:30	00:42	15:50
Participant 3	03:11	16:24	13:14	17:06	18:10	01:04	19:00	20:50	01:50	16:08
Participant 4	4:10	9:52	5:42	10:55	15:55	5:00	16:29	18:12	1:43	12:25
Participant 5	2:57	9:50	6:53	10:49	12:10	1:21	12:32	14:50	2:18	10:32

Participant 6	6:25	24:35	18:10	25:22	27:40	2:18	28:00	30:40	2:40	23:08

Table 1: Original website Task Times

Participants / Tasks	Task 1			Task 2			Task 3			Total Task Time
	Start Time	End Time	Task Time	Start Time	End Time	Task Time	Start Time	End Time	Task Time	
Participant 1	4:38	7:10	2:32	8:03	8:58	0:55	9:26	10:10	0:44	4:18
Participant 2	4:17	6:14	2:57	7:12	7:47	0:35	8:16	8:48	0:32	4:06
Participant 3	3:04	4:56	1:52	5:21	6:19	0:58	6:36	7:21	0:45	3:58
Participant 4	3:31	6:10	2:39	6:45	7:50	1:05	8:11	8:31	0:20	4:04
Participant 5	3:02	5:25	2:23	6:06	6:50	0:44	7:17	7:51	0:34	3:41
Participant 6	3:00	4:52	1:52	5:38	6:23	0:45	6:33	7:35	1:02	2:39

Table 2: Redesigned website Task Times

Data Collection and Analysis

The metrics that we collected are - Lostness, Post session questionnaire score, Effectiveness, Task time average.

Lostness

Lostness is a metric used to quantify the efficiency of user navigation on the web. It measures how efficiently a user is able to accomplish a task within a website or web application by considering the number of pages visited compared to the minimum number required to complete the task.

Here's how the components are defined and how the lostness metric is calculated:

N : The number of different web pages visited while performing the task.

S : The total number of pages visited while performing the task, counting revisits to the same page.

R : The minimum (optimum) number of pages that must be visited to accomplish the task.

The lostness, denoted as L , is calculated using the following formula:

$$L = \sqrt{[(N/S - 1)^2 + (R/N - 1)^2]}$$

#Participant	N	S	R	Lostness
Participant 1	16	35	11	0.924
Participant 2	18	45	11	0.994
Participant 3	17	32	11	0.893
Participant 4	18	49	11	1.0107
Participant 5	12	16	11	0.577
Participant 6	15	44	11	0.962

Table 3 : Lostness for original website for task 1

#Participant	N	S	R	Lostness
Participant 1	4	4	4	0
Participant 2	4	4	4	0
Participant 3	4	4	4	0
Participant 4	5	6	4	0.605

#Participant	N	S	R	Lostness
Participant 5	10	12	4	0.605
Participant 6	5	5	4	0.447

Table 4 : Lostness for original website for task 2

#Participant	N	S	R	Lostness
Participant 1	3	3	2	0.577
Participant 2	5	7	2	0.9414
Participant 3	3	3	2	0.577
Participant 4	1	1	2	1
Participant 5	2	2	2	0
Participant 6	3	8	2	0.9787

Table 5 : Lostness for original website for task 3

#Participant	N	S	R	Lostness
Participant 7	7	7	7	0
Participant 8	7	7	7	0
Participant 9	7	7	7	0
Participant 10	7	7	7	0
Participant 11	7	7	7	0
Participant 12	7	7	7	0

Table 6 : Lostness for prototype for task 1

#Participant	N	S	R	Lostness
Participant 7	3	3	3	0
Participant 8	3	3	3	0
Participant 9	3	3	3	0
Participant 10	3	3	3	0
Participant 11	3	3	3	0
Participant 12	3	3	3	0

Table 7 : Lostness for prototype for task 2

#Participant	N	S	R	Lostness
Participant 7	2	2	2	0
Participant 8	2	2	2	0
Participant 9	2	2	2	0
Participant 10	2	2	2	0
Participant 11	2	2	2	0
Participant 12	2	2	2	0

Table 8 : Lostness for prototype for task 3

Post session questionnaire:

After the user completes the Post Session Questionnaire, the score is determined by averaging the responses to the eleven questions. All the participants have responded to the post session questionnaire and the ratings range from 1 to 7. We calculated the average rating for each question and the sum of the rating for each participant..

The post session questionnaire is as follows:

1. On a scale of 1 to 7, how would you rate the overall ease of navigating the Balenciaga website during the tasks? (1 being very difficult, 7 being very easy)
2. On a scale of 1 to 7, how would you rate the clarity of the instructions provided before each task? (1 being very unclear, 7 being very clear)
3. On a scale of 1 to 7, how would you rate the visual design and layout of the Balenciaga website? (1 being poor, 7 being excellent)
4. On a scale of 1 to 7, how easy was it to locate the items specified in each task? (1 being very difficult, 7 being very easy)
5. On a scale of 1 to 7, How easy was it to add the items to the cart? (1 being hard and 7 being easy)
6. On a scale of 1 to 7, how challenging did you find Task 1? (1 being very challenging, 7 being very easy)
7. On a scale of 1 to 7, how challenging did you find Task 2? (1 being very challenging, 7 being very easy)
8. On a scale of 1 to 7, how challenging did you find Task 3? (1 being very challenging, 7 being very easy)
9. On a scale of 1 to 7, how confident were you in your understanding of the website's features and functionalities after completing the tasks? (1 being not at all confident, 7 being very confident)
10. On a scale of 1 to 7, how satisfied were you with your ability to complete each task? (1 being very dissatisfied, 7 being very satisfied)
11. On a scale of 1 to 7, how likely are you to recommend the Balenciaga website to others based on your experience today? (1 being very unlikely, 7 being very likely)

Original website:

Participant/Question	Q-1	Q-2	Q-3	Q-4	Q-5	Q-6	Q-7	Q-8	Q-9	Q-10	Q-11	Sum
Participant 1	5	7	5	4	5	6	2	3	5	6	4	52
Participant 2	1	7	2	1	4	2	6	4	2	3	1	33
Participant 3	7	7	7	6	7	6	6	6	6	6	7	71
Participant 4	5	7	5	3	7	2	6	1	6	5	5	52
Participant 5	2	7	2	2	3	2	6	3	3	1	2	33
Participant 6	6	7	5	5	6	6	6	6	6	6	6	65
Average	4.33	7	4.33	3.5	5.33	4	5.33	3.83	4.67	4.5	4.16	51

Table 9 : Post session questionnaire rating for original website

Prototype website:

Participant/Question	Q-1	Q-2	Q-3	Q-4	Q-5	Q-6	Q-7	Q-8	Q-9	Q-10	Q-11	SUM
Participant 7	7	7	7	7	7	7	7	7	7	7	7	77
Participant 8	7	7	7	7	7	7	7	7	7	7	7	77
Participant 9	7	7	7	7	7	6	6	6	7	7	7	74

Table 10 : Post session questionnaire rating for prototype

Effectiveness

Effectiveness is a crucial metric in usability studies as it measures the ability of users to accomplish tasks successfully within a system. It provides valuable insights into the overall performance and functionality of the interface or product being evaluated. By assessing effectiveness, we can determine how well users can achieve their goals and objectives using the system, which directly impacts user satisfaction and overall usability. Effectiveness metrics, such as completion rates or task success rates, offer tangible indicators of system performance, helping identify areas for improvement and optimization.

The formula for effectiveness is mentioned below:

$$Effectiveness = \frac{Number\ of\ tasks\ completed\ successfully}{Total\ number\ of\ tasks\ undertaken} * 100\%$$

Usability Study on Original Website :

#Participant	Task 1	Task 2	Task 3	Effectiveness
Participant 1	0	1	0	33.333%
Participant 2	1	0	1	66.667%
Participant 3	0	1	0	33.333%

#Participant	Task 1	Task 2	Task 3	Effectiveness
Participant 4	0	1	0	33.333%
Participant 5	0	1	0	33.333%
Participant 6	0	1	0	33.333%
Average	16.667%	83.333%	16.667%	38.889%

Table 11 : Effectiveness for original website

Usability test on the prototype :

#Participant	Task 1	Task 2	Task 3	Effectiveness
Participant 7	1	1	1	100%
Participant 8	1	1	1	100%
Participant 9	1	1	1	100%
Participant 10	1	1	1	100%
Participant 11	0	1	1	66.667%
Participant 12	0	1	1	66.667%
Average	66.667%	100%	100%	88.889%

Table 12 : Effectiveness for the prototype

Overall relative efficiency

Efficiency is measured in terms of task time. That is, the time (in seconds and/or minutes) the participant takes to successfully complete a task. The time taken to complete a task can then be calculated by simply subtracting the start time from the end time as shown in the equation: Task Time = End Time – Start Time

Efficiency can then be calculated in one of 2 ways - Time based efficiency and overall relative efficiency. In our case, the task success for the original website is skewed and hence the overall relative efficiency makes better sense.

The overall relative efficiency is calculated by comparing the time taken by users who finished the task to the total time taken by everyone who tried. So, it shows how quickly people who completed the task did it compared to everyone who tried.

$$Overall\ Relative\ Efficiency = \frac{\sum_{j=1}^{R}\sum_{i=1}^{N} n_{ij}t_{ij}}{\sum_{j=1}^{R}\sum_{i=1}^{N} t_{ij}} \times 100\%$$

N = The total number of tasks (goals)

R = The number of users

n_{ij} = The result of task i by user j; if the user successfully completes the task, then N_{ij} = 1, if not, then N_{ij} = 0

t_{ij} = The time spent by user j to complete task i. If the task is not successfully completed, then time is measured till the moment the user quits the task

Original Website

Participants / Tasks	Task 1			Task 2			Task 3			Total Task Time
	Start Time	End Time	Task Time	Start Time	End Time	Task Time	Start Time	End Time	Task Time	
Participant 1	03:27	11:22	07:55	12:25	13:38	01:13	14:10	14:47	00:37	09:45
Participant 2	02:57	09:50	06:53	10:49	12:10	01:21	12:32	14:50	02:18	10:32
Participant 3	03:35	16:14	12:39	18:40	21:09	02:29	21:48	22:30	00:42	15:50
Participant 4	03:11	16:24	13:14	17:06	18:10	01:04	19:00	20:50	01:50	16:08
Participant 5	04:10	09:52	05:42	10:55	15:55	05:00	16:29	18:12	01:43	12:25
Participant 6	06:25	24:35	18:10	25:22	27:40	02:18	28:00	30:40	02:40	23:08

Average Task Times	10:45	02:14	01:38	14:38

Table 13 : Task time for original website

Prototype Website

Participants / Tasks	Task 1			Task 2			Task 3			Total Task Time
	Start Time	End Time	Task Time	Start Time	End Time	Task Time	Start Time	End Time	Task Time	
Participant 7	04:38	07:10	02:32	08:03	08:58	00:55	09:26	10:10	00:44	04:18
Participant 8	04:17	06:14	02:57	07:12	07:47	00:35	08:16	08:48	00:32	04:06
Participant 9	03:04	04:56	01:52	05:21	06:19	00:58	06:36	07:21	00:45	03:58
Participant 10	03:31	06:10	02:39	06:45	07:50	01:05	08:11	08:31	00:20	04:04
Participant 11	03:02	05:25	02:23	06:06	06:50	00:44	07:17	07:51	00:34	03:41
Participant 12	03:00	04:52	01:52	05:38	06:23	00:45	06:33	07:35	01:02	02:39
Average Task Times	02:22			00:50			00:39			03:47

Table 14 : Task time for prototype

From table 11, we can infer that only participant 2 has successfully done task 1 and 3. And the rest of the participants could only finish task 2 successfully on the original website. So, we would ignore adding eleven time values in the numerator of our efficiency calculation.

From table 12, we can infer that only participants 11 and 12 were unable to finish task 1. So, we would ignore adding these two time values in the numerator of our efficiency calculation.

Total time taken to finish tasks on the original website by participants 1-6 = 1275 seconds.

Sum of the time taken by the participants 1-6 to finish the tasks successfully = 5268 seconds.

Overall relative efficiency for the original website = (1275/5268)*100% = 24.203%

Total time taken to finish tasks on the prototype by participants 7-12 = 1139 seconds.

Sum of the time taken by the participants 7-12 to finish the tasks successfully = 1394 seconds.

Overall relative efficiency for the prototype = (1139/1394)*100% = 81%

What improvements were made to the site

Major Redesign Goals:

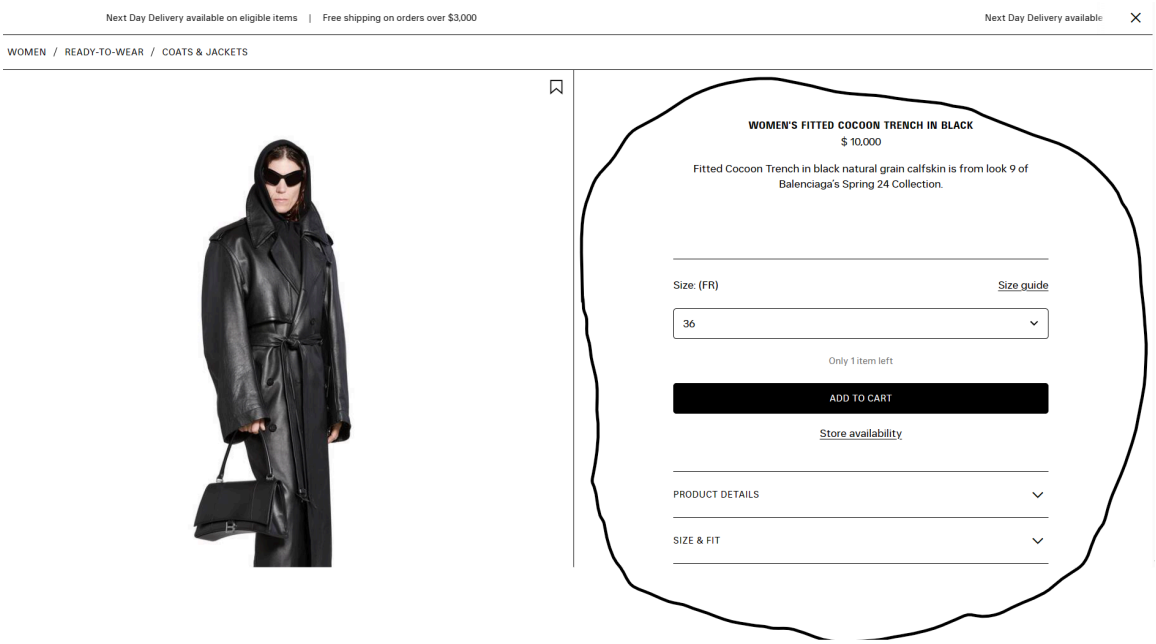
Quantity Selection Feature:

Problem: The absence of a quantity selection option limited user control and flexibility in adding items to the cart.

Redesign: Introduced a quantity selection feature to allow users to specify the desired number of items they wish to purchase.

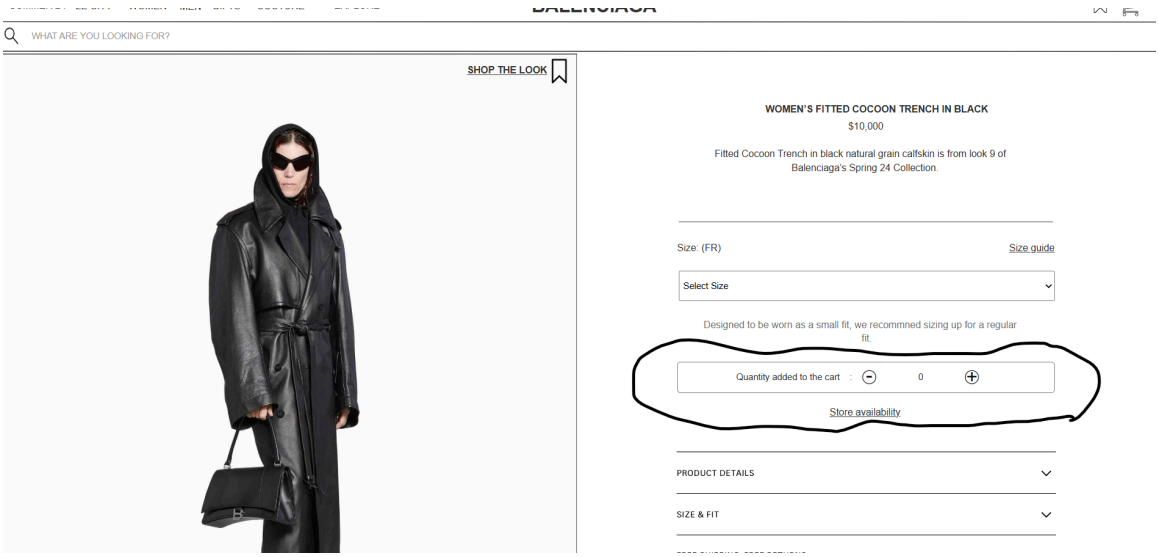
Justification: This improvement enhances user customization and convenience, following the User Control and Freedom principle from Nielsen's 10 Usability Heuristics.

Screenshot from the original website



No option to add the quantity in the original website

Screenshot from the redesigned website:



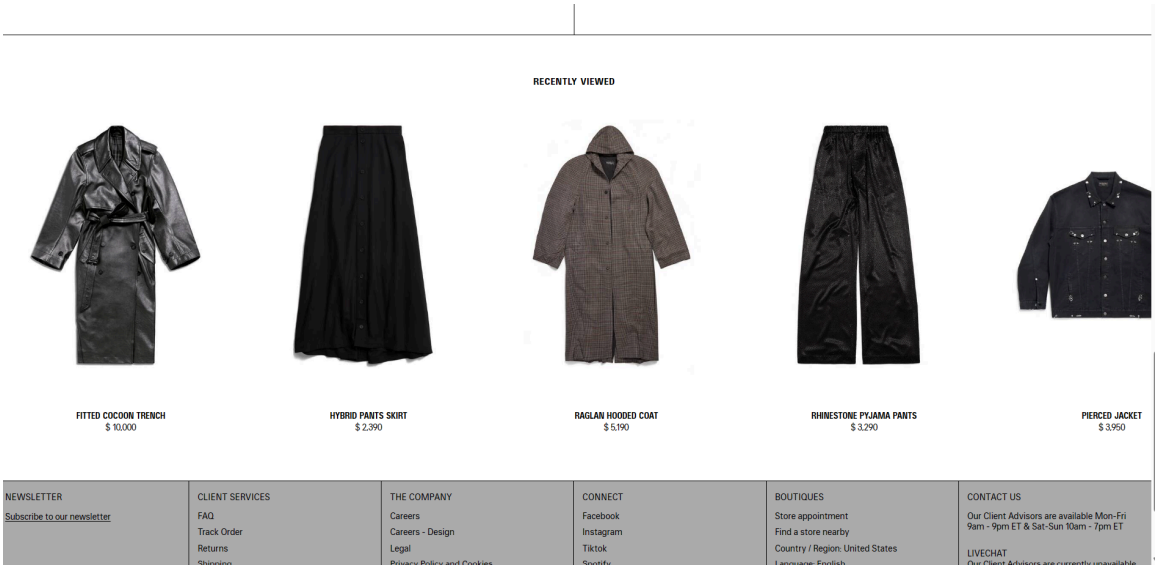
As we can see, we have added the feature to select quantity in the redesigned website

Product Recommendations Feature:

Problem: Lack of product recommendations diminished the user's ability to discover complementary items or complete looks.

Redesign: Implemented a product recommendations feature to suggest matching or complementary products, including items worn by the model.

Justification: This feature aids users in making informed purchasing decisions, aligning with the Recognition rather than recall heuristic from Nielsen's 10 Usability Heuristics.



There is no section for product recommendation in the wrap shirt page of the original website.

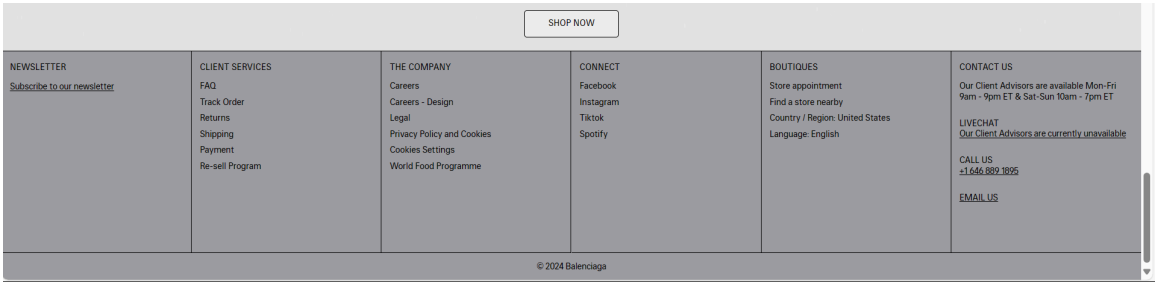
In the redesigned website, we have added the product recommendation section with the title “Customers also bought”.

Feedback Widget:

Problem: No direct method to gather user feedback.

Redesign: Introduced a feedback widget to gather user feedback for website enhancement and usability improvement.

Justification: This aims to improve user experience and engagement, following the Visibility of system status principle from Nielsen's 10 Usability Heuristics.



There is no section for feedback in the Original website.

We have added the feedback section in the redesigned website

Minor Redesign Goals:

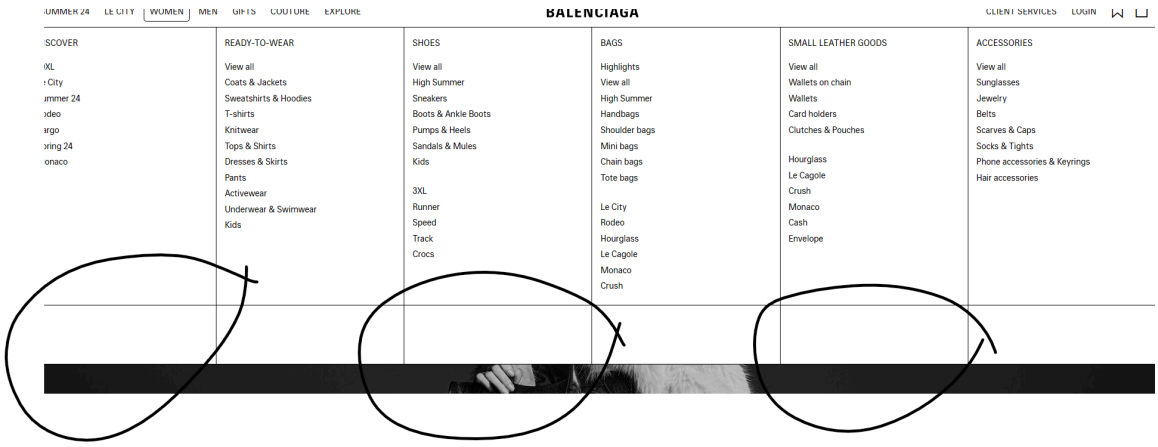
Rectification of Empty Rectangles in the Dropdown of Home Menu:

Problem: Presence of empty rectangles at the bottom of the dropdown menu was redundant and distracting.

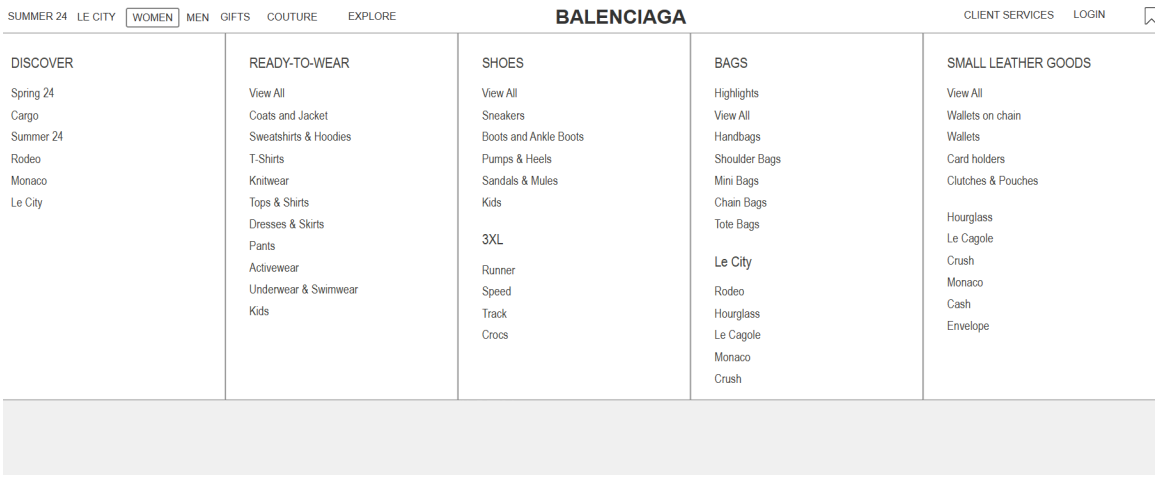
Redesign: Removed the unnecessary empty rectangles to streamline the menu's functionality and clarity.

Justification: This improves the website's clarity, following the Aesthetic and minimalist design principle from Nielsen's 10 Usability Heuristics.

Original website:



As we can see there are empty rectangles at the bottom of the drop down.



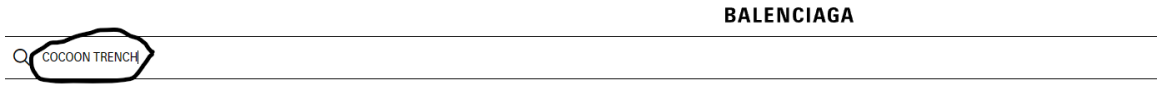
But in the redesigned website there is no such problem.

Elimination of All Caps in the Search Bar:

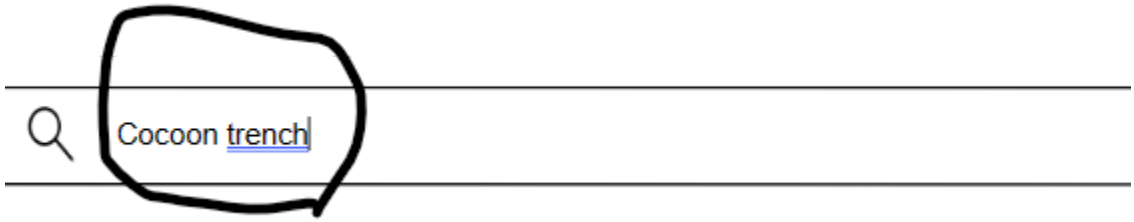
Problem: Automatic conversion of typed text into uppercase in the search bar was distracting.

Redesign: Ensured that the text entered in the search bar is displayed in its original case for enhanced readability.

Justification: This enhancement improves readability, aligning with the Flexibility and efficiency of use heuristic from Nielsen's 10 Usability Heuristics.



As observed, in the original website, any text we enter is automatically converted to uppercase letters.



We addressed this issue in the redesigned website.

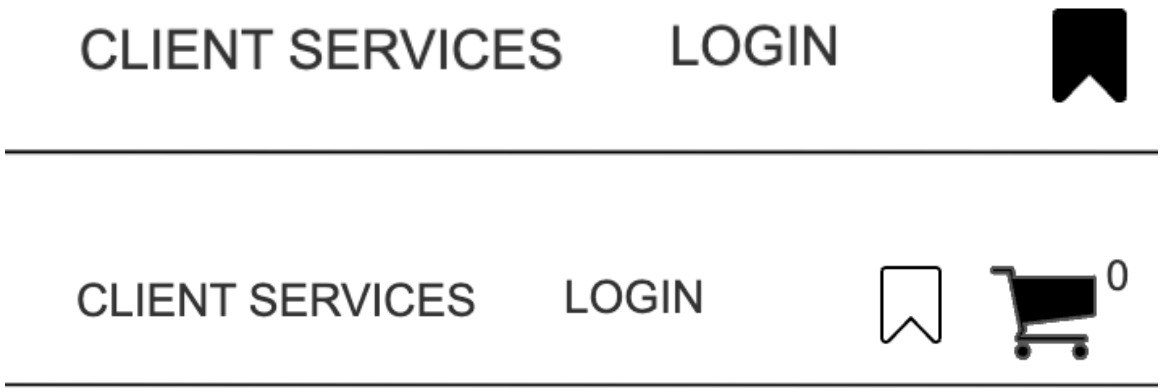
Inconsistency in Focus (Search, Wishlist):

Problem: Inconsistency in visual feedback for the search and wishlist icons.

Redesign: Altered the color of the search and wishlist icons when hovered over or clicked for consistent visual feedback.

Justification: This improvement reduces cognitive load and streamlines navigation across the website, following the Recognition rather than recall heuristic from Nielsen's 10 Usability Heuristics.

In the above figure the icons for save and cart were not highlighted when hovered over. Below is the redesign of that feature.



Cart Issue:

Problem: Inconsistency in displaying the cart icon.

Redesign: Displayed the number of products added to the cart inside the cart icon for consistency.

Justification: This maintains consistency and enhances user experience, following the Consistency and standards principle from Nielsen's 10 Usability Heuristics.

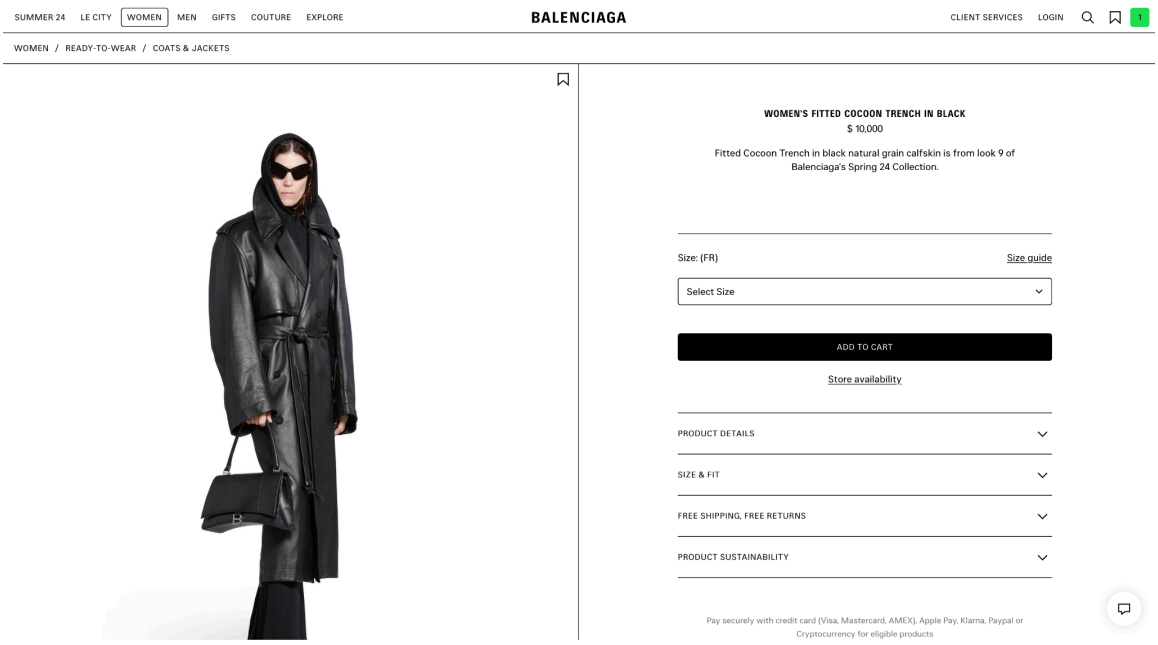
The cart icon is not present in the actual website above, instead it shows just the number. Below is the redesign where the cart icon along with the number is shown.

Shop the Look Feature:

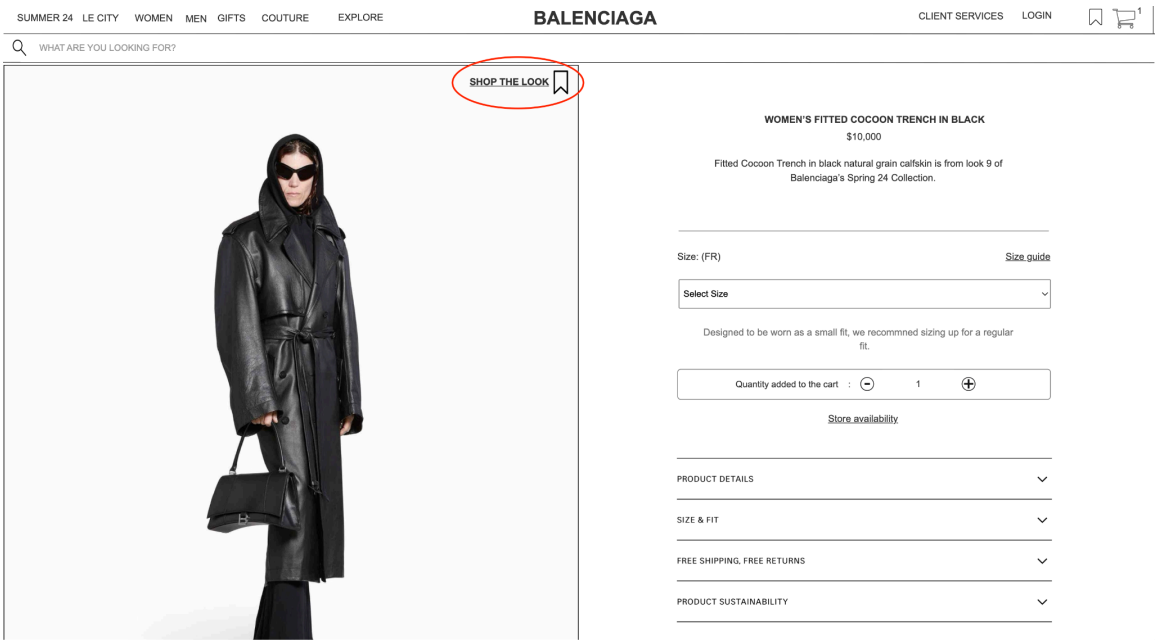
Problem: Users couldn't easily purchase the featured items in model outfits.

Redesign: Introduced a "Shop the Look" feature providing links to the depicted items for easy purchasing.

Justification: This encourages deeper engagement and exploration of related items, aligning with the Help and documentation principle from Nielsen's 10 Usability Heuristics.



In the above image of the original website, the “Shop the look” feature is not present which makes it harder to find the items. Below is the redesign which will make the task easier.

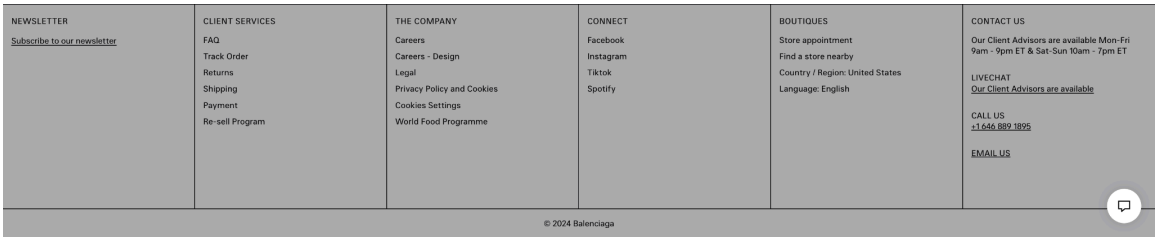


Bottom Navigation Bar:

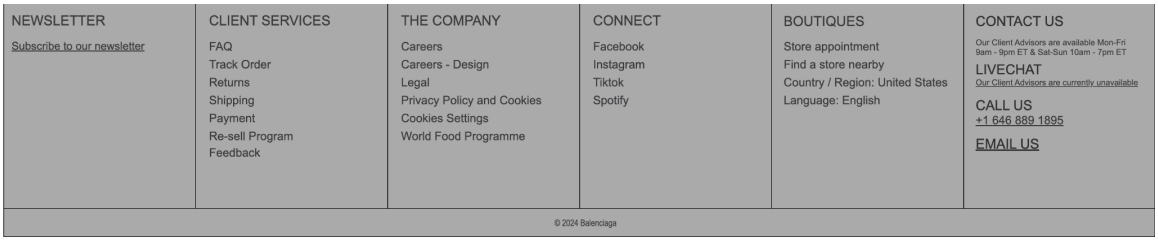
Problem: Poor aesthetic quality of the bottom navigation bar.

Redesign: Created a visually appealing layout to promote increased user engagement and readability.

Justification: This improves visual appeal and consistency, following the Aesthetic and minimalist design principle from Nielsen's 10 Usability Heuristics.



In the above image there are a lot of white space which has been rectified in the redesign below.



Usability Goals Achieved:

Enhanced User Engagement:

Implemented the "Shop the Look" feature to encourage deeper exploration of outfits featured on models.

Improved User Satisfaction:

Introduced the quantity selection feature to enhance user customization and convenience.

Enhancing Purchase Experience:

Implemented effective product recommendations to suggest complementary items or complete looks.

Enhanced Visual Appeal and Consistency:

Addressed the inconsistent focus indicators and optimized layout and design elements for a cleaner and visually appealing website.

Enhanced Clarity:

Streamlined menu functionality and enhanced clarity by removing empty rectangles at the bottom of dropdown menus.

Overall Findings & Recommendations

USABILITY FINDINGS :

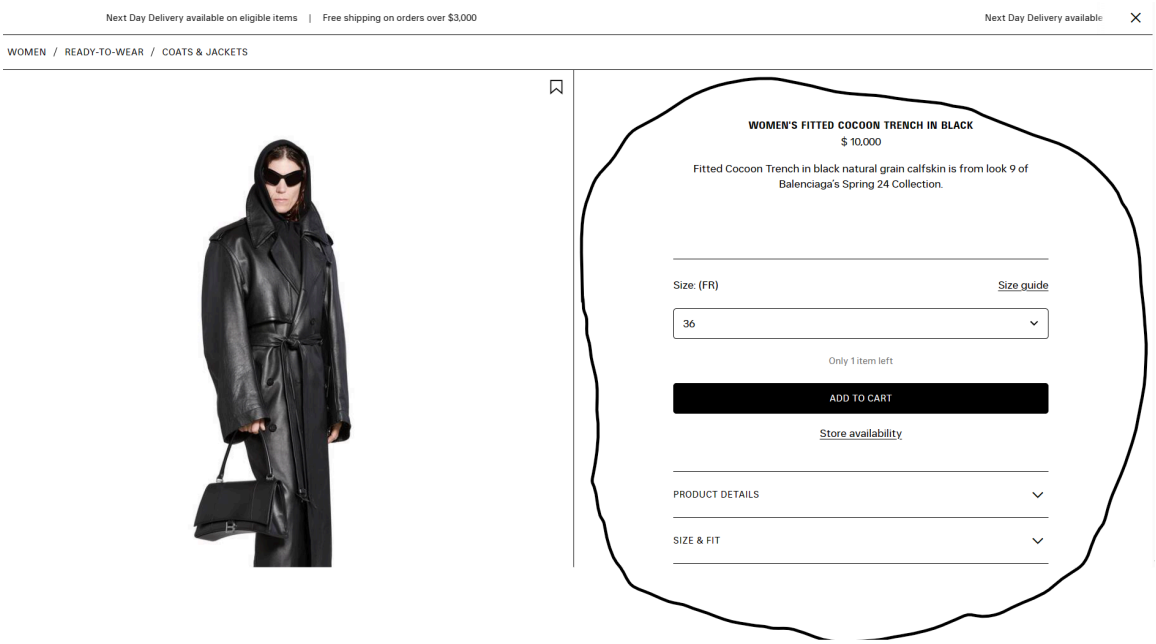
Task 1:

Number of participants	[12]
% successful	[41.67%]

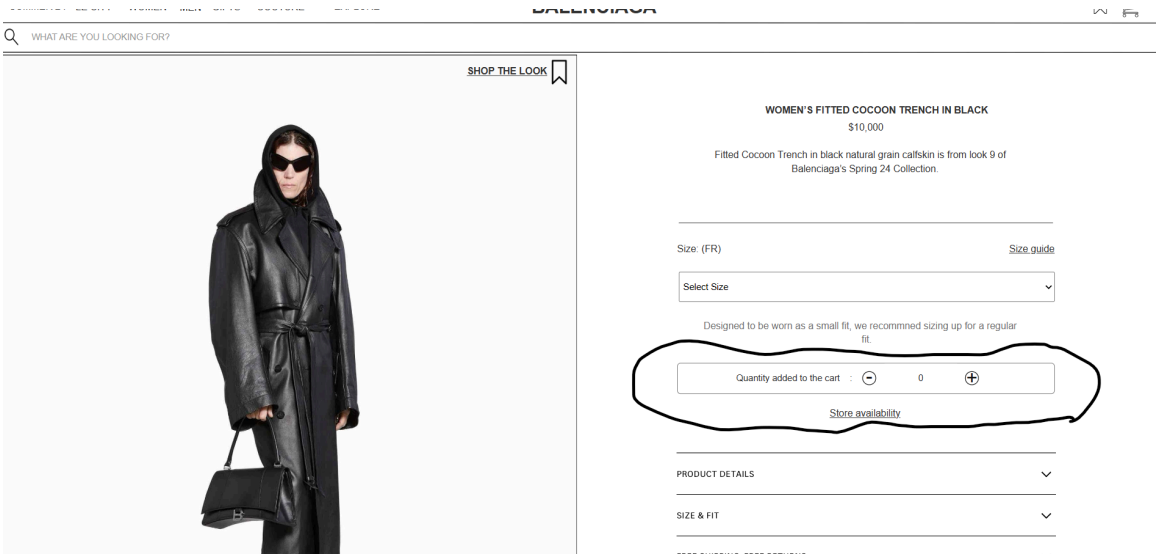
Finding [#1] : Improved Adding to Cart Interaction

In the original website, users faced difficulties in adjusting the quantity of items in their cart directly from the product page. This lack of direct control hindered the user experience, requiring users to navigate away from the product page to modify their cart contents. To address this issue, in the prototype easy-to-use controls for adding or reducing items in the cart directly from the product page were introduced, enhancing user convenience and streamlining the purchasing process.

Screenshot of adding to cart feature in original website



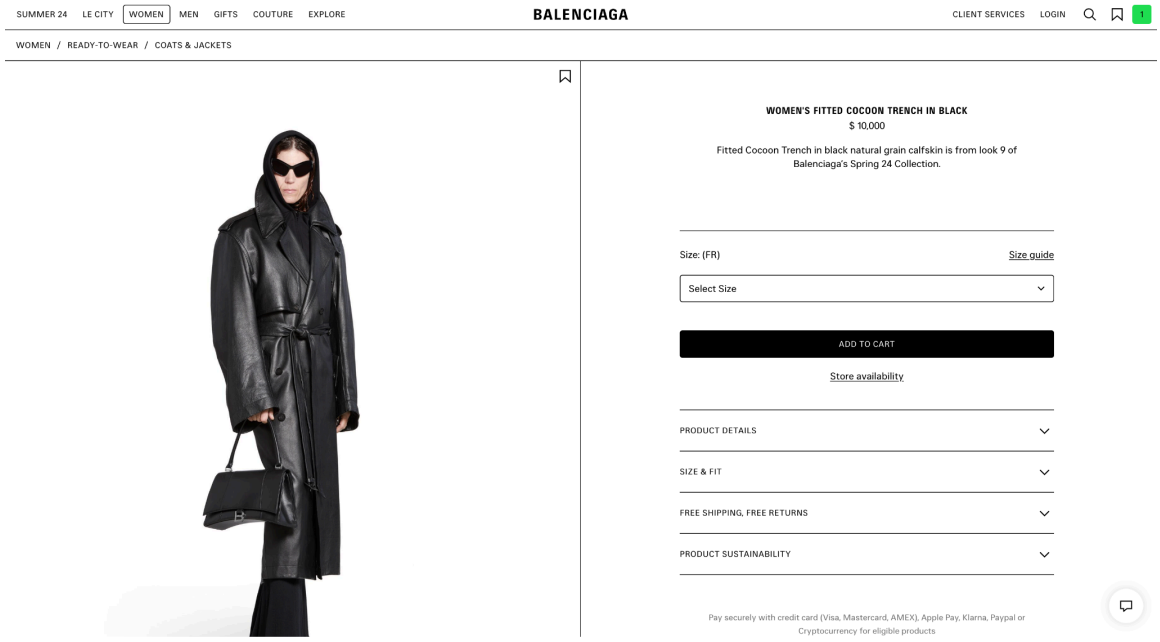
Screenshot of adding to cart feature in prototype



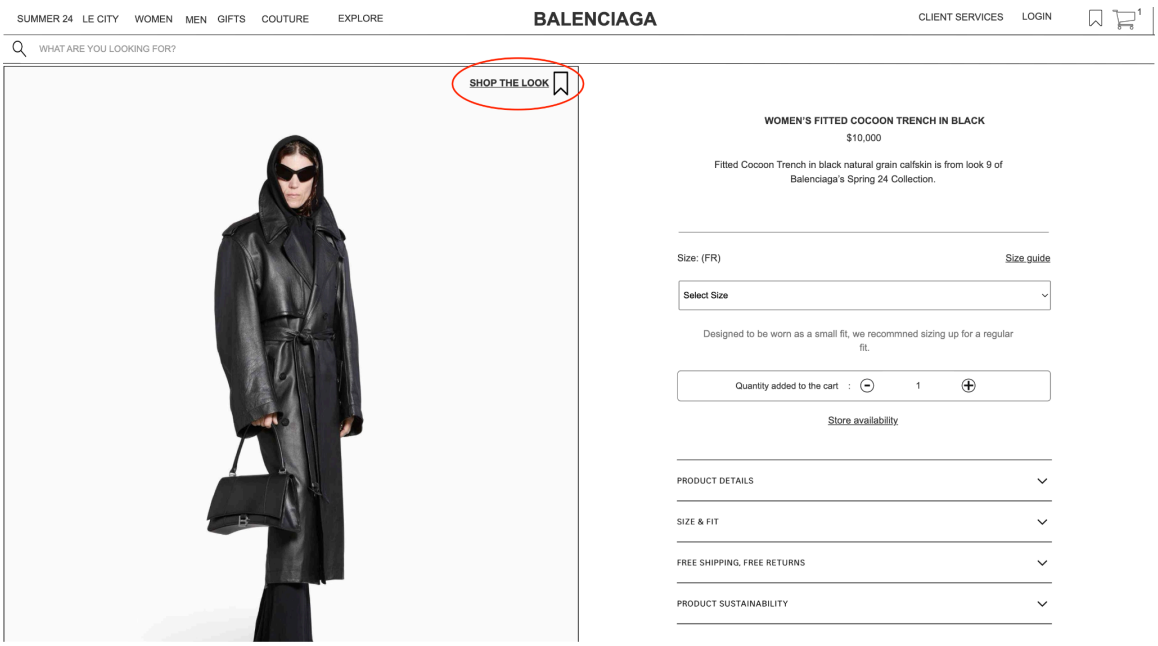
Finding [#2] : Enhanced "Shop the Look" Feature

In the original website, purchasing all the items featured in a model's image was a cumbersome and time-consuming task. The absence of a streamlined process increased cognitive load and task duration for users. To improve efficiency and reduce cognitive load, a "Shop the Look" shortcut was introduced in the prototype, allowing users to purchase all items featured in the image with a single click. This enhancement significantly reduces task duration and cognitive load, enhancing user satisfaction and usability.

Screenshot of absence of "Shop the look" feature in original website



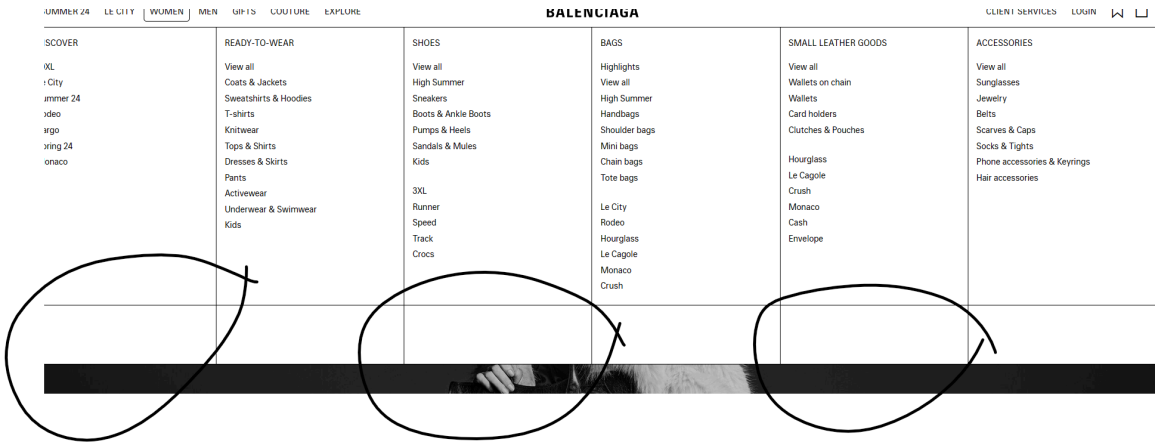
Screenshot of "Shop the look" feature in prototype



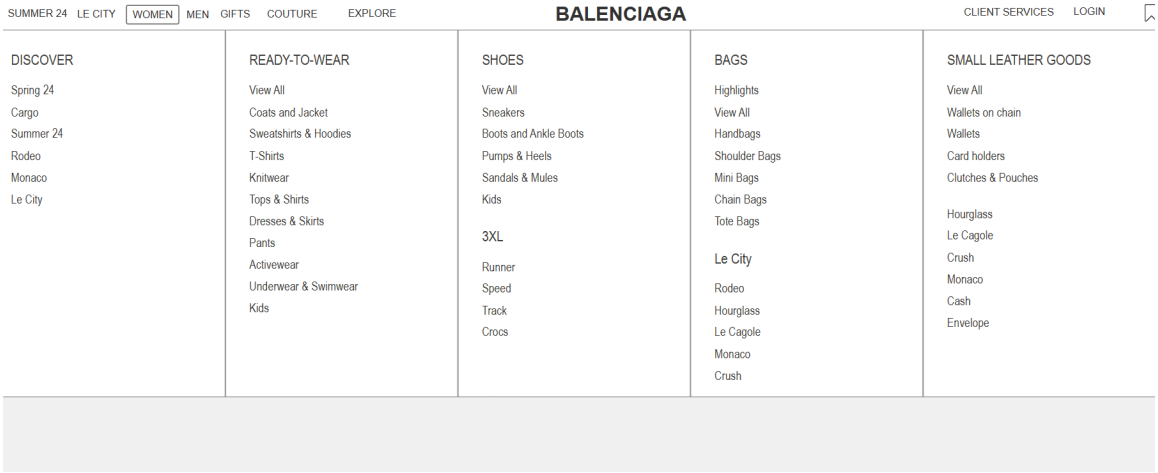
Finding [#3] : Aesthetic Enhancement in Menu Design

In the original website, empty rectangles at the end of the menu detracted from the visual appeal and violated principles of Human-Computer Interaction (HCI). These empty rectangles contributed to visual clutter and could confuse users, impacting overall aesthetics and usability. In the prototype, the empty rectangles were removed, resulting in a cleaner and more aesthetically pleasing menu design. This change not only improves visual appeal but also enhances user experience by eliminating unnecessary distractions and promoting clarity in menu navigation.

Screenshot of menu design in original website



Screenshot of menu design in the prototype



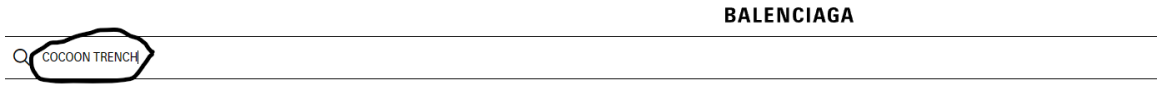
Task 2:

Number of participants	[12]
% successful	[91.67%]

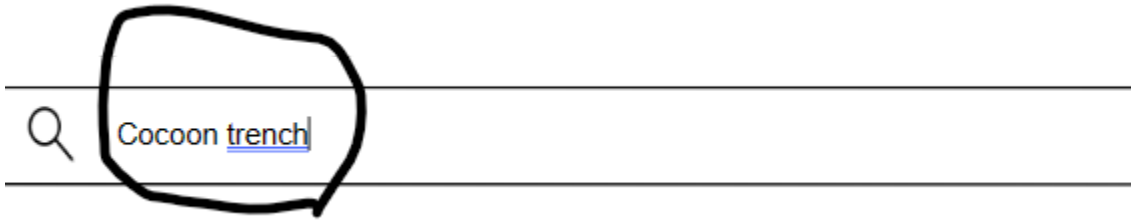
Finding [#4] : Text Case Sensitivity in Search Bar

In the original website, the text entered into the search bar was displayed in all capital letters, potentially causing confusion and frustration for users accustomed to typing in lowercase. By modifying this feature to display the text as typed, regardless of case sensitivity, users experienced a more intuitive and familiar interaction, reducing cognitive load and enhancing usability.

Screenshot of text in Search bar in original website



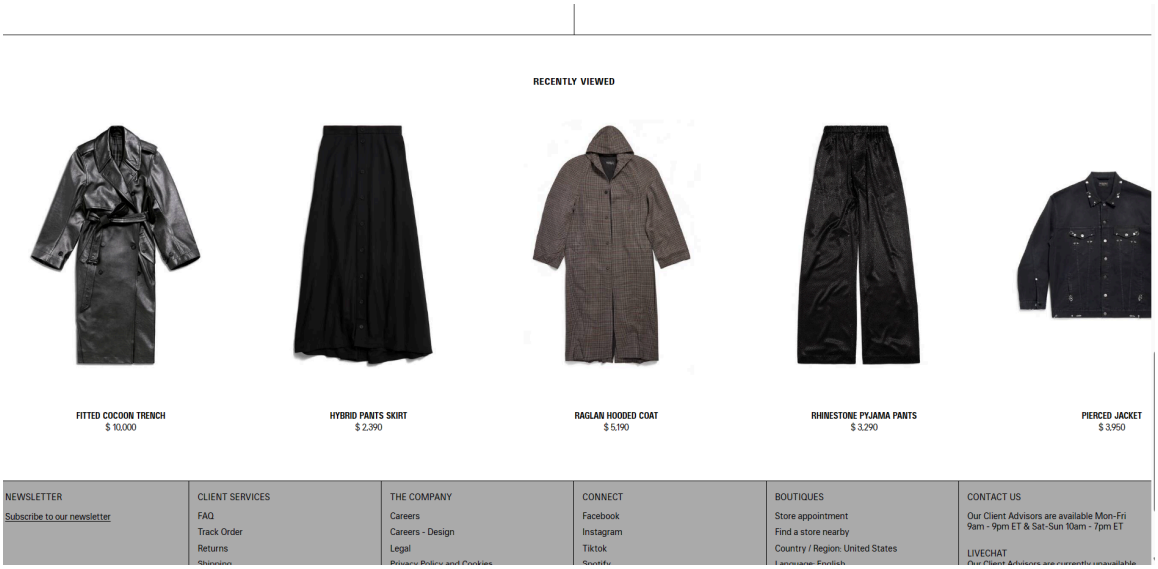
Screenshot of text in Search bar in the prototype



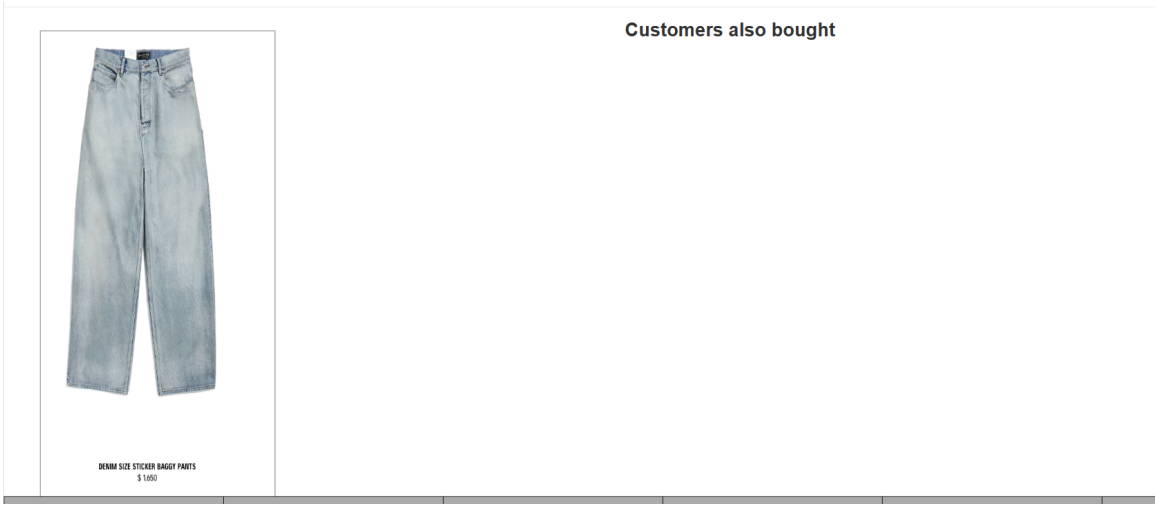
Finding [#5] : Introduction of "Customers Also Bought" Feature:

The addition of the "Customers Also Bought" feature provides users with valuable recommendations for complementary items, enhancing their shopping experience and facilitating product discovery. This feature promotes user engagement and increases the likelihood of additional purchases, contributing to improved user satisfaction and overall platform usability.

Screenshot of absence of the "Customers also bought" feature in the original website



Screenshot of the "Customers also bought" feature in prototype



Finding [#6] : Inconsistent Cart Visibility:

The original website lacked consistency in displaying the cart, with the quantity added visible only at the top of the page. The prototype redesigned the cart display to ensure

visibility throughout the website, along with the quantity added. Enhancing cart visibility and displaying the quantity added consistently across the website improves user experience by providing users with clear feedback on their selected items and ensuring easy access to the cart for reviewing and managing their purchases. This redesign aligns with Nielsen's Visibility of System Status heuristic, promoting user awareness and reducing cognitive load.

Screenshot of Cart feature in the original website

Screenshot of Cart feature in the prototype

Task 3:

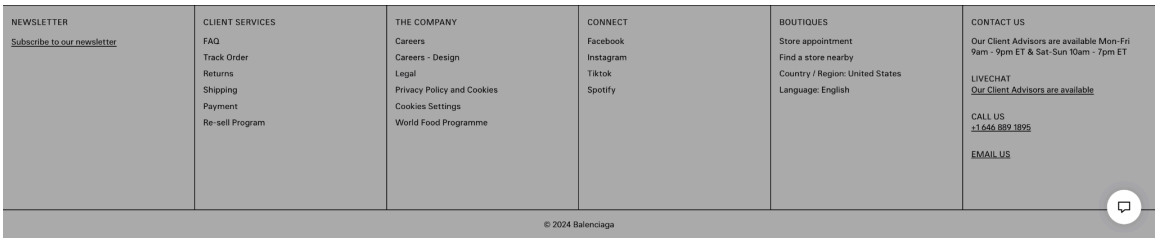
Number of participants	[12]
% successful	[58.33%]

Finding [#7]: Simplified Feedback Process in the Prototype

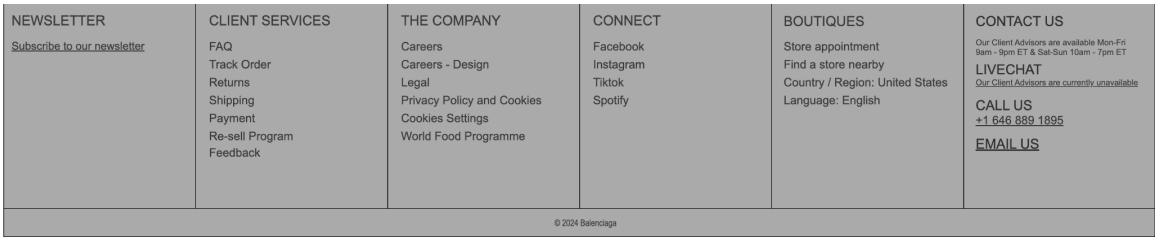
To address the usability issue identified in the original website, a simplified feedback process was implemented in the redesigned website. A direct link to provide feedback was added to the bottom navigation bar, offering users a convenient and easily accessible method to share their thoughts about the website. By streamlining the feedback process

and reducing the number of steps required, users are more likely to engage in providing feedback, fostering improved communication between users and website administrators and enhancing the overall user experience.

Screenshot of absence of the feedback shortcut in the bottom nav bar in the original website



Screenshot of the feedback shortcut in the bottom nav bar in the prototype



- **TABLES PRESENTING THE MEANS AND STANDARD DEVIATIONS (OR VARIANCES) FOR ALL METRICS ON ALL TASKS**

Lostness:

Original website:

	MEAN	**VARIANCE**	**STANDARD DEVIATION**
TASK1	**0.89**	**0.022**	**0.147**
TASK2	**0.28**	**0.079**	**0.281**
TASK3	**0.679**	**0.124**	**0.352**

Prototype:

	MEAN	VARIANCE	STANDARD DEVIATION
TASK1	**0**	**0**	**0**
TASK2	**0**	**0**	**0**
TASK3	**0**	**0**	**0**

Post session questionnaire: (This is on all the tasks)

Original website

	MEAN	VARIANCE	STANDARD DEVIATION
ALL TASKS	**51**	**207.6**	**14.41**

Prototype

	MEAN	VARIANCE	STANDARD DEVIATION
ALL TASKS	**72**	**34.33**	**5.85**

Effectiveness: (This is on all the tasks)

Original website

	MEAN	VARIANCE	STANDARD DEVIATION
ALL TASKS	**38.89**	**154.32**	**12.42**

Prototype

	MEAN	VARIANCE	STANDARD DEVIATION
ALL TASKS	**88.89**	**246.9**	**15.713**

Average Task Time: (This is on all the tasks)

Original website

	MEAN	VARIANCE	STANDARD DEVIATION
ALL TASKS	**878**	**7291**	**270.012**

Prototype

	MEAN	VARIANCE	STANDARD DEVIATION
ALL TASKS	**227**	**1064**	**32.6**

<u>RESULTS FROM T-TESTS</u>

Lostness:

Task 1

	N	df	M	S^2
Treatment1	**6**	**5**	**0.89**	**0.03**
Treatment2	**6**	**5**	**0**	**0**

The *t*-value is 13.59178. The *p*-value is < .00001. The result is significant at *p* < .05.

The t-value and p-value above suggest that there is a significant difference between the lostness for task1 in the original website and the prototype.

Task 2

	N	df	M	S^2
Treatment1	**6**	**5**	**0.28**	**0.09**
Treatment2	**6**	**5**	**0**	**0**

The *t*-value is 2.19648. The *p*-value is .052754. The result is *not* significant at *p* < .05.

The t-value and p-value above suggest that there is no significant difference between the lostness for task2 in the original website and the prototype.

Task 3

	N	df	M	S^2
Treatment1	**6**	**5**	**0.68**	**0.15**
Treatment2	**6**	**5**	**0**	**0**

The *t*-value is 4.31303. The *p*-value is .00153. The result is significant at $p < .05$.

The t-value and p-value above suggest that there is a significant difference between the lostness for task3 in the original website and the prototype.

Post session questionnaire: Note this t-test is on all the tasks.

	N	df	M	S^2
Treatment1	**6**	**5**	**51**	**249.2**
Treatment2	**6**	**5**	**72**	**41.2**

The *t*-value is -3.01854. The *p*-value is .012928. The result is significant at $p < .05$.

The t-value and p-value above suggest that there is a significant difference between the rating of the post session questionnaire in the original website and the prototype.

Effectiveness: Note this t-test is on all the tasks.

	N	df	M	S^2
Treatment1	**6**	**5**	**38.89**	**185.19**
Treatment2	**6**	**5**	**88.89**	**296.29**

The *t*-value is -5.58. The *p*-value is .012928. The result is significant at $p < .05$.

The t-value and p-value above suggest that there is a significant difference between the effectiveness in the original website and the prototype.

Average Task Time: Note this t-test is on all the tasks.

	N	df	M	S^2
Treatment1	**6**	**5**	**878**	**87487.6**
Treatment2	**6**	**5**	**6389.33**	**1277.87**

The *t*-value is -5.35. The *p*-value is .012928. The result is significant at $p < .05$.

The t-value and p-value above suggest that there is a significant statistical difference between the average task time in the original website and the prototype.

Findings	Recommendations

<table>
<tr>
<td>Task 1:
1 out of the 6 participants completed the task for the original website.
4 out of 6 participants completed the task in the prototype we designed.

<u>Statistical evidence</u> :

Even with this strategy and effort, only 1 participant of our study was able to find it but it took her 12 minutes to do so, which is too high.

The lostness for this task came out to be at 0.89345 on average with a standard deviation of 0.14742.

This indicates that, on average, users navigate through approximately 89% of unnecessary pages before completing a task.

The variability in lostness values suggests differing levels of navigation efficiency among users. High lostness values can lead to frustration, increased cognitive load, and ultimately, user abandonment.</td>
<td>Our recommendations for the task 1 are:
To make the search bar aesthetic enhancement in menu design
Addition of quantity addition or subtraction to cart from the product page
Addition of “Shop the look” feature to buy all the products featured by the model in the image.
Implementing these recommendations would enhance the user experience by improving the visual appeal and usability of the website, streamlining the purchasing process, and providing users with convenient options to quickly find and purchase items featured in model images.</td>
</tr>
<tr>
<td>Task 2:
5 out of the 6 participants completed the task for the original website.
6 out of 6 participants completed the task in the prototype we designed.</td>
<td>The recommendations for task2 are :
Consistency of the cart icon in all pages even when products are added to cart</td>
</tr>
</table>

Statistical evidence : The results revealed that participants, on average, took about 02:14 minutes to complete the task. However, after implementing the redesigned prototype, participants completed the task in just 50 seconds on average	• Added a “Customers also bought” section • Maintain text case sensitivity in the search bar. Implementing these recommendations would enhance the user experience by providing consistent visual cues, facilitating intuitive navigation with related product suggestions, and ensuring ease of use and familiarity with the search functionality, ultimately improving user satisfaction and usability.
Task 3: 1 out of the 6 participants completed the task for the original website. 6 out of 6 participants completed the task in the prototype we designed. Statistical evidence: On average, the participants on the original website took 01:38 minutes to conclude the task. On average, the participants on the original website took 0:39 minutes to conclude the task. There is approximately 60% decrease in time. On a scale of 1 to 7, 1 being very challenging, 7 being very easy, the task was rated as 3.83 on average for the	Recommendation for task 3 is : • Add feedback as a separate item in the bottom navigation bar so that it is clearly visible for the users. This would make it for easy access and navigation.

original website and 6.5 for the prototype. The task went from being rated as hard to easy.	