# Evaluating and Designing the UI and UX of Rainbow Six: Siege

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## Abstract

This paper evaluates and redesigns the UI and UX of the video game Rainbow Six: Siege by game studio Ubisoft Montreal. With this project, I identify the good and bad parts of the UI through evaluation and then redesign it based on those findings. To identify these parts of the UI, I used different expert review techniques which includes consistency inspection, heuristic review, and cognitive walkthroughs. I found that the UI is good in that it is aesthetically pleasing, clear, and consistent. But, I also found that the UI has flaws in that there are too many layers for the operator customization screens, the battle pass map is difficult to navigate, and too much information requires hovering over it to access. I then conducted user research, by giving usability tests to participants with different levels of familiarity with the game. For these tests, I measured the time to complete the task, the number of clicks, and the number of mistakes and slips. Then using the information from the evaluations and tests, I redesigned the battle pass, operator select, operator customization, and shop screens.

## 1 | Introduction

Rainbow Six: Siege is a multiplayer tactical FPS by game studio Ubisoft Montreal. Released in 2015, the game is eight years old and has changed its game direction multiple times due to cultural and financial shifts. As a result, its UI has undergone multiple overhauls to accommodate for these changes, with UI designers having to contend with decisions made in the past by other designers with different goals. In addition to this, its gameplay requires a lot of

knowledge unique to Rainbow Six: Siege that poses a unique design challenge. In this paper, I will be evaluating its UI and use the findings from these evaluations to redesign it. Throughout this paper, I will be referring to Rainbow Six: Siege by different diminutives such as Rainbow Six, Siege, and R6 for convenience and tonal variety.

## 1.1 | Background

Rainbow Six's gameplay has an emphasis on environmental destruction, team work, and strategy. It is a part of the hero shooter sub genre in which players can choose to play different "hero" characters with weapons and abilities unique to that character. In Rainbow Six, these characters are called "operators" and have abilities unique to each operator, called a "primary ability" as well as other non-unique utility devices, called "gadgets". These operators are categorized as either attacker or defender, with their abilities and gadgets complimenting their type. As of the writing of this paper, 66 operators exist within the game, with 33 operators being on defense and 33 on attack.

Much of the equipment operators receive are unique to them and allow for a lot of player customization. The weapons they use (mostly guns) can be customized through a variety of attachments that affect how that weapon performs as well as cosmetic customization, such as weapon skins. Cosmetic customization also extends to the operators themselves, with different uniforms and hats being available for purchase with both in-game and real world currency. This can be customized on a separate screen dedicated to the operator, whereas the weapons themselves are nested in another screen accessible through the operator's page. This is where players will tend to spend the most time when not actively in a match. Cosmetics are purchasable through the shop which is where the game makes a majority of its money.

## 1.2 | Problem

The UI and UX of Rainbow Six: Siege, as a whole, is quite good, especially in regards to the in-game heads up display. However, there are many areas of its UI outside of the actual gameplay that can be improved upon. Due to the large number of operators that each have their own unique cosmetics, weapons, gadgets, and abilities, R6's UI designers must accommodate for a wealth of different items that players may want to find. Many legacy design decisions that were created when the game had much fewer operators still exist in the game and no longer work with R6's current roster. From surface level observation, I see that it is inefficient in some areas, most noticeably with the amount of clicks and screens one must go through to accomplish common tasks. These include the attachments of the weapons players want to use as well as player cosmetics. Specific UI sections that I believe can be improved are its store and player customization screens. These inefficiencies in UI do not only affect player enjoyment, but also the potential monetary gain of Ubisoft due to difficulties in viewing and buying cosmetics.

## 1.3 | Approach and Strategy

To analyze and evaluate Rainbow Six's UI and UX, I used techniques that minimize the involvement of lab participants. This is not due to a belief that user research is an unnecessary measure but rather a budgetary restraint due to my limited time and resources. These techniques include expert reviews such as heuristic evaluation, cognitive walkthroughs, and consistency inspection. Due to my extensive experience with the game, I think I can provide useful feedback and analysis despite not being a UX expert.

I still conducted some user research, however. This research consists of one on one usability tests with different types of users. These users consist of both players experienced with the game and those who are new to the game. This allows me to identify problems existing users have, as well as aspects of the UI that confuse new users. This also gives me an idea of

areas of improvement that I have not found solely from my own experience as well as ones specific to newcomers that I am not able to find due to my existing experience with the game. These areas of improvement allow me to identify sections of the UI that require significant overhaul that I will redesign.

# 2 | UI Evaluation

## 2.1 | Consistency Inspection

For the consistency inspection, I focused on several traits throughout the UI. These include button responsiveness, color consistency, sound cues, and text styling. After examining these elements, I found that the general UI is very consistent.

All buttons share the same appearance. They start as a static light gray box with dark gray text. Then when hovered over, they expand and turn light blue with a bright cyan stripe at the bottom. The background of the button also has subtle animations. The contrast between the light blue with cyan highlights and the light gray, as well as the dynamic backgrounds helps guide the player's eye to the current selection.

The color consistency across the UI is very good, always drawing from the same color palette. Light grays for buttons, blacks for section headers, light blues for selected items, and occasional cyan highlights for eye-catching items. These colors help create visual shortcuts as well as establish a hierarchy across interactable elements.

Sound cues are used for all interactions and different types have their own recognizable cue. Actions that traverse “deeper” into the screen hierarchy and “affirmative” actions have the same deep pitched sound cue. Actions that travel out of the screen hierarchy and “negative” actions also have the same high pitched sound cue. Neutral actions and actions that travel “laterally” have a flat sound. All interactable buttons also have a subtle clicking sound when

hovered over. These all provide an additional layer of responsiveness, as well as indicating the different types of actions, which cannot be indicated visually without breaking the game's aesthetic.

Text is also very consistent, using only two fonts. One for primary or title text and another for descriptive or secondary text. When the title text is the header for a screen, it is italicized. Otherwise, it is bolded and used for section headers. For the secondary text, it's put into all-caps if used as a subtitle and used as normal for paragraph text. This helps create text hierarchy without introducing too many clashing fonts.

Overall, all UI elements are consistent in responsiveness, color, sound, and text. These make the different sections of the UI very cohesive. This aspect of the UI needs no changing.

## 2.2 | Heuristic Evaluation

For our heuristic evaluation of our subject's UI, I will be evaluating based on a list of heuristics obtained from multiple sources. These include Shneiderman's 8 golden rules of interface design, which were covered in class, as well as heuristics that apply specifically to video games. Select heuristics specifically pertaining to UI were taken from Federoff's 2002 paper "Heuristics and Usability Guidelines for the Creation and Evaluation of Fun in Video Games" and Desurvire and Wiberg's 2009 paper "Game Usability Heuristics (PLAY) for Evaluating and Designing Better Games: The Next Iteration". The complete list of heuristics has been compiled in the list below.

| No. | Heuristic |
|---|---|
| 1 | Interfaces should be consistent in control, color, typography, and dialog design. |
| 2 | Cater to universal usability. |
| 3 | Offer informative feedback through audio/visual/visceral means. |
| 4 | Prevent errors. |
| 5 | Permit easy reversal of actions. |

| | |
|---|---|
| 6 | Players feel in control. |
| 7 | Design dialogs to yield closure. |
| 8 | Reduce short-term memory load. |
| 9 | Navigation is consistent, logical and minimalist. |
| 10 | A player should always be able to identify their score/status. |
| 11 | Minimize the menu layers of an interface |
| 12 | Follow trends set by the gaming community to shorten the learning curve. |
| 13 | Art should speak to its function. |
| 14 | Screen layout is efficient, integrated, and visually pleasing. |
| 15 | Help is easily accessible if needed. |
| 16 | The player should not need to read a manual in order to use the UI. |

Ideally, heuristic evaluations should be undertaken by three to five people. However, as this is a solo project, I will be the sole evaluator. First, the success areas.

| No. | Success Area | Heuristic(s) |
|---|---|---|
| 1 | Buttons are reactive when hovering over and pressing. These reactions include size expansion, colors changing, sound effects, and animation of their contents. | 3, 13 |
| 2 | Users are shown where they are in the menus through the navigation header at the top of the page. | 10 |
| 3 | All buttons are consistent, generally using the same sound effects for the same actions, having similar animations, same color schemes, etc. | 1, 13 |
| 4 | Menu sections are clearly divided into different categories through different names, appearances, and layouts. | 3, 9 |
| 5 | All sections of the menu are aesthetically pleasing | 13, 14 |
| 6 | Keys for actions are displayed when an action is available. | 8 |
| 7 | Screens for scrollable screens have elements cut off at the bottom or a scroll bar to indicate scrollability. | 3 |
| 8 | Important areas such as game modes have attached buttons that give information when clicked. | 2, 3, 15 |

The UI for Rainbow Six is generally very satisfying to interact with and visually pleasing. Its layout is clearly demarcated and all the information is clear, when information is shown. This

makes the UI easily learnable. The navigation bar also makes it clear where users are in the hierarchy of screens so users do not get lost.

Now, for the problem areas.

| No. | Problem Area | Heuristic(s) |
|---|---|---|
| 1 | Users are required to navigate through many menu layers for relatively common actions (sometimes as many as 6). | 11 |
| 2 | While operator icons and pictures are shown, the operator's name is not displayed unless hovered over. Can be difficult to find someone if a user is new. | 2, 8, 16 |
| 3 | In the shop menu, weapon names are not shown unless hovered over. Weapons are also not sorted beyond the weapon category. Due to the amount of weapons in the game (over 100), it is difficult to remember every gun. | 2, 8, 16 |
| 4 | Main menu is cluttered and can be overwhelming for new players. | 2, 14 |
| 5 | The battle pass map does not have intuitive controls. It is also very zoomed in, which makes it easy to get disoriented and difficult to navigate. | 2, 6, 9 |
| 6 | Lists of things often are not sorted in an efficient way, making searching for something difficult. | 14 |

Siege's UI has an onboarding problem. With the game requiring so much knowledge to learn, teaching new players without overwhelming them with too much info or cluttering the UI is no easy task. However, there are some areas where the need for information trumps UI cleanliness. This is a consistent theme throughout the UI, with much of it saying too little.

## 2.3.1 | Cognitive Walkthrough Methodology

With the previous evaluations finding general areas of interest, I performed a cognitive walkthrough to further evaluate these areas. For the walkthrough, I picked tasks that players of all types would do regularly. These tasks include: customizing the loadout of an operator, buying a cosmetic from the shop, starting a match in a certain gamemode, unlocking an item in the battle pass, and creating a party by inviting friends. My methodology for conducting the walkthrough was to "step" through the process of completing the task and answering four questions at each step. I defined each "step" as reaching a different screen with new

information. These questions were taken from the 2002 paper, “Cognitive Walkthrough for the Web” by Blackmon, Polson, et al. The questions are as follows:

- Will the user try and achieve the right outcome?
- Will the user notice that the correct action is available to them?
- Will the user associate the correct action with the outcome they expect to achieve?
- If the correct action is performed, will the user see that progress is being made towards their intended outcome?

Rather than show the answers for every step, I will discuss the results by summarizing the findings for each task, as well as the problems for specific personas.

### 2.3.2 | User Personas

For the walkthrough, I also created and used multiple user personas, each intended to represent a common type of player in R6’s playerbase. Each persona has demographic information such as name and age, as well as descriptions of their personality, behaviors, motivations, and needs as a user. Personas’ names have been given an alliterative adjective to emphasize their personality and assist in memorability.

New Nathan is 13 years old and Rainbow Six: Siege is his first video game. As a result, he is completely unfamiliar with the UI and video games in general. However, he has played the tutorial, as the game directs new players to it, so he has a very basic understanding of the game and its mechanics. His behaviors include spending a lot of time exploring the UI and looking for information about the different operators. Because he is new, he needs an easily learnable UI and readily available information.

Competitive Claire is 17 years old and is a very experienced player. Since she is a teenager, she has a lot of free time and uses it to exclusively play Rainbow Six: Siege. As such, she understands all mechanics of the game and how to use the UI. Her behaviors include having

long gaming sessions and changing operator loadouts to get the best competitive edge. She needs to be able to access operator customization quickly, stay updated on gameplay changes.

Social Sam is 33 years old and plays Siege casually as a way of having fun with his friends. He does not have a lot of time with his busy job and doesn't have a lot of time to play. He values connections and frequently sends friend requests to other players who were fun to play with. His behaviors include having short gaming sessions and frequently inviting friends to play with him. He needs to be able to quickly send friend requests, party invites, and start matches.

Aesthetic Audrey is 25 years old and plays Siege for its artistic flair, valuing unique characters and cool guns. As such, she is focused on making her operators look as cool as possible with cosmetics. Her behaviors include scrolling the store to find new cosmetics and paying money to buy them. She needs to be able to browse all the cosmetics available and purchase them quickly and easily.

### 2.3.3 | Cognitive Walkthrough Results

For operator customization task, I found that the amount of screens needed to reach the customization screen and the tutorials for an operator (six) is excessive. This is a pain point for New Nathan, Competitive Claire, and Aesthetic Audrey. It impacts the user experience for New Nathan as it makes it take longer to reach the tutorial, something he will be doing frequently for many different operators. Competitive Claire and Aesthetic Audrey will also be customizing their operators frequently, changing the attachments and cosmetics of their operators respectively. This pain point is partially alleviated by the fast screen transitions, as well as button placement on each screen, which means users do not have to move the cursor very far to continue their task. This makes exploring menus and correcting mistakes a little faster for New Nathan.

In the match selection task, game modes are categorized into buttons for three groups: tactical, quick play, and training, which you can select on the first screen. These buttons then take you to another screen with the specific game modes under those sections. On the groups screen, each button has a child button that appears when hovering over the parent button. This button will start a match in the last game mode you played in that section allowing you to bypass the second screen.

This shortcut positively impacts Competitive Claire and Social Sam's user experience, as they both want to enter a match as quickly as possible. On the second screen, the one where you select a gamemode, another child button offers information on the gamemode, which greatly assists New Nathan in learning what each gamemode has to offer. The division of gamemodes into groups also lessens the cognitive load at each step by breaking down the users' decision making. This prevents New Nathan from being overwhelmed by a large amount of gamemodes and prevents Social Sam and Competitive Claire from pressing the wrong button. One problem with the game mode sections is that the image for the button is often not specific enough to be a good representation of the game mode or the game mode groups. This can be a confusing first impression to New Nathan. However, the images are labeled clearly with large bold text and are distinct enough in color and content which makes it easily learnable, alleviating this issue somewhat.

In the store task, the first screen contains select items that are new or on discount. Then there are other buttons that lead to lists of different categories of items. Generally these lists have the same format, with different cards representing items taking up the left half of the screen and a real time rendering of the item on the right half. This looks great from an aesthetic standpoint. It is very structured and looks visually satisfying. However, from a functionality standpoint, it is very lacking. Due to the size of the cards and the item inspector taking up half the screen, only a maximum of eight cards can be seen at once.

Given that there are 112 guns in the game, a number that will only increase as new updates are released, this makes it very difficult to search through the items by the gun's icon. These guns are also very similar in shape and profile to each other, as they are based on real world guns, making them visually blend together. In addition to this, the gun's name is only shown on the right side of the screen when the icon is hovered over.

This means that if a user wants to search the list by name, they have to hover over every card, which is very slow. With players like Competitive Claire, who knows every single weapon and what they look like, this isn't as much of an issue. But for Social Sam and New Nathan, who don't have a solid grasp on all the weapons, searching for a gun can be much harder. Even with her knowledge of the guns, Competitive Claire would still have difficulties finding guns, as the list, beyond grouping by weapon type, has no sorting or order. Any additional sorting method, such as alphabetically or by release date, would greatly aid in finding items much faster. All the other categories of items have similar problems as the weapons section, where the list has poor groupings or orderings and much of the screen space is taken up by a preview section that is often redundant.

For the last task, unlocking items from the battle pass, much of the problems with the task stems from the navigation of the battle pass map. The battle pass is a 2D map with multiple paths made up of different tiles, like a board game. Each tile is an item and players "travel" on the map by unlocking items. Players navigate the map using the WASD or arrow keys. This is a significant departure from standard UI navigation as players usually only navigate by clicking or scrolling. Since the map is quite large, the default view only covers 1/12th of the overall map. This makes the player feel claustrophobic, leads to the loss of spatial awareness for all types of players, and makes knowing where one is on the map confusing. While there is a mini-map for the pass, it does not draw enough attention to itself. When a player first opens the battle pass and nothing is unlocked yet, the map is a dark gray, which blends very easily into the

background. This leads to players not noticing it until unlocking a significant portion of the map, at which point players have already figured out how to navigate the map or have given up using it entirely. Since the battle pass is designed for all players and is the game's primary source of revenue, these deficiencies affect all the user personas laid out before, driving away potential customers by intimidating or overwhelming first time buyers of the battle pass.

In conclusion, these cognitive walkthroughs have identified several points of interest that have the potential to be improved through a redesign. These include the general structure of the family of screens under operator customization, the item lists in the store, and the navigation of the battle pass. These match closely with the identified problem areas in the heuristic evaluation and will be the focus of the user research and redesign phase.

# 3 | User Research

## 3.1.1 | Usability Testing Methodology

For the user research portion of this paper, I set out to examine the performance of users on common tasks in the game. The research was conducted with a combination of remote and in-person testing, with whatever was most convenient for the participant being the method chosen. Recordings of each test were taken to aid in observation. The specific procedure for conducting the tests is as follows:

1. Read out the task for the participant.
2. Tell the participant to begin and start the stopwatch.
3. For back to back tasks, hit the lap button whenever the subject passes a "step" as defined in the cognitive walkthrough evaluation
4. Stop the stopwatch when the task is finished.
5. Record times.
6. Ask participant about certain actions taken and their thought process.
7. Rewatch recordings to record more detailed observations and measure metrics

### 3.1.2 | Tasks

These tasks are specific situations that are supposed to mimic the tasks in the cognitive walkthrough evaluation. The details of each task were designed to be as representative of an average action as possible. The tasks are numbered in order to group tasks under a general category of task. The first number represents the category, shown as the bold text in the table. The second number is the subtask number.

| Task No. | Description |
|---|---|
| 1 | **Customize the gun of an operator.** |
| 1.1 | Go to the operator Jackal. Equip the ITA12L, put the HOLO D sight and the ELEPHANT skin on it. |
| 1.2 | Go to the operator Sens. Equip the HK417, give it the HOLO D sight and the Dread Factor charm. |
| 1.3 | Go to the operator Wamai. Equip the uniform Azure Diver. Then go to Clash. Equip the P-10C |
| 2 | **Buy something from the shop** |
| 2.1 | Find the Melusi Summertide bundle. |
| 2.2 | Find the Kapkan headgear Digital Flora. |
| 2.3 | Find the P229 skin Wild Instinct. |
| 2.4 | Find the uniform Sweltering Heat for the operator Goyo. |
| 3 | **Unlock something from the battle pass** |
| 3.1 | Find the uniform Gatekeeper |
| 3.2 | Find the headgear Peony Engraving |
| 3.3 | Find the weapon skin Structural Scales |

The metrics I measured for these tests include the time to complete a task (as well as times per step), number of clicks, and the amount of mistakes (conscious errors, often caused by flawed decision making) and slips (unconscious errors, often caused by mechanical

mistakes like misclicks or missed buttons) that a participant makes. Time is measured in the minute, second, millisecond format. Unfortunately, I was only able to perform 4 user tests, as a majority of people asked were unwilling, even when offered rewards and incentives. However, the test group I was able to recruit was fairly diverse and covers the overall demographic of the game well. Participants 1 and 2 both had extensive experience with R6, playing the game for multiple years. Participant 3 was familiar with the basics, having played for three months, while 4 was completely new to the game. The raw data from the results of these tests can be found in the appendix.

### 3.1.3 | Results Analysis and Lessons Learned

For operator customization, times were fairly long for something done so frequently. A majority of the time for the task is looking for the operator the task specifies. Even players that were very familiar with the game had difficulties finding the correct operator at times. A majority of the errors made were slips and were low enough frequency that they can be chalked up to just simple mistakes. However for participant 4, they had difficulties identifying operators quickly even when given the icon for that operator. Despite the icons being easily identifiable and unique from one another, there is not enough emphasis on them, causing participants' eyes to gloss over them. There are also so many cards that newer players’ eyes, and even veteran players to a certain extent, get overwhelmed.

There are also issues with moving between other operators. Since it takes 6 clicks to get to the operator customization screen, it also takes roughly the same amount to get out of it, as players must click the back button for each screen. This has a large effect on newer players as seen with task 1.3, where participants 3 and 4 take much longer than 1 and 2. Therefore, when a player wants to change attachments for all operators due to an update to attachments (which

happens often), veteran players must spend 20-30 seconds for each of the 112 guns that are spread out between 66 operator screens.

For the shop, the bundles section was fairly easy for all participants as it had an option to sort bundles by name, price, and release date, as well as filter items by operator. This section also does not have the large preview section of the window, allowing for more space to be allocated for the item cards. This led to very fast times, even for participant 4. However, the lists for weapons, uniforms, and headgear are a different story. The amount of task time spent searching through these cards is too high for newer players.

All three of these lists have half the screen taken up by a preview that shows what's on the card, adding no extra information. The weapon list, as mentioned before, is just a large list of weapons with no organizational order and their names aren't on the card. It also lacks the filtering and sorting system that the bundles page has. Because of this, participants 3 and 4 took more than twice as long as 1 and 2 as they were not familiar with every weapon in Rainbow 6. It is unreasonable to expect players, both new and old, to memorize every gun and their appearance. These criticisms and observations also apply to the uniforms and headgear, with the further problem of grouping operators by the counter terrorism unit they are in, something new players will not be aware of.

In the battle pass test, tasks were administered back to back. This means that players were given the list of items and were told to find them all, in order. I did this because all three tasks take place on the same screen, unlike the weapon and shop tasks. Since the screen is a map, by executing these three tasks back to back, I could see if participants gained spatial awareness as they searched.

Looking at the results, the times between participants 2, 3, and 4 are all fairly similar to each other. Participant 1 has much shorter times than everyone else. This is because this participant had bought the battle pass some months before the test, while the other participants

did not. Searching for items requires one to look through every item in the map, as there is no search function, and there are too many items to be able to memorize them. In the tasks, participants attempted to search the entire map for items. However, they would often miss spots of the map without realizing it, due to the small size of the viewing area and the minimap not showing this viewing area. This led to multiple situations where participants wouldn't search the spot where the item was located as they believed they had already searched it.

# 4 | Redesigning the UI

## 4.1 | Goals

As a recap of the areas of interest I found in the evaluations and user tests, I have problems with the battle pass map, the item lists in the store, the operator select screen, and the customization page. Pictures of the redesigned UI screens as well as the original scenes can be found in the appendix. I would have put the images next to the paragraphs but they took up too much space. I recommend opening another copy of this document so that you can view the images and analysis side by side. Due to a lack of time and resources, I was unable to turn these mockups into functional prototypes and conduct user research on them, as was originally planned.

### 4.2.1 | Redesigning the Battle Pass

As I discussed earlier, the battle pass's "field of view" is too low, which means that players fail to get a good spatial awareness from the map. To alleviate this, I expanded the amount of tiles the player can see at one time. The visible window was expanded from 3 by 7 tiles to 4 by 9 tiles. This new window size allows the player to see nearly a quarter of the map at once. In this way, the player's view "splits" the map into four pieces rather than the nine pieces

the original window does. This should, in theory, lighten the short term memory load for the user as they don't have to keep nine different map parts in memory, only four.

As with most maps, the most important thing the map should communicate is the overall shape of the map and where the user is within it. With a larger window, users should gain a better understanding of the map's shape. The mini map, with its highlighted tile that corresponds to the tile the user is hovering over, also helps show where the user is. However, as seen in the tests, this minimap does get missed, even by veteran players. Therefore, I've added a bright cyan rectangle on the minimap that shows the bounds of the current view on the map. This helps add additional information to the minimap, as well as creates a highlight on that minimap that is larger and brighter than the single tile, which should also be much more noticeable when moving. This should draw more attention to it and help players get a better grasp of the map.

### 4.2.2 | Redesigning the Store

With the shop, I saw that the bundles section had much better results for both new and old players in terms of time spent, while the weapons and uniforms sections did not. So, I want to transfer the functionality and layout of the bundles section to the weapons and uniforms section. I previously recognized that the preview window takes up too much space for what information it gives and, as a result, the bundles section does not have one. The majority of the space is taken up by the real-time preview of the weapon, which is functionally identical to the weapon icons in the cards. The name and the list of users that a weapon has isn't redundant, but that information could easily be put within the card itself, rather than in a separate section. We can then use the preview section to hold more weapon cards. This makes visually searching for items a lot easier.

However, we can do more to assist with searching. I mentioned before the lack of an organizational order. The bundle section sorts by release and also allows users to sort by name and price. It also has a filter button that lets you filter by operator. I can use that sorting and filtering system within the weapons list, which can speed up the searching process. Both of these improvements, adding sorting systems and removing the preview window, would be applied to the uniforms section. I did not make a prototype diagram for the uniform section but the general structure would be exactly the same as the weapons list except that the items would be grouped by operators rather than their CTU.

### 4.2.3 | Redesigning Operator Selection

Previously, I've recognized that the operator select screen is not beginner friendly, as it only identifies operators by icon, requiring players to hover over them to see their name and gadget. This can be time consuming for new players. I've changed the player cards to include the name of the operator to help new players, as well as give a little bit more information to help veteran players search faster. The name of the operator used to be in the expanded card when it was hovered over. However, since it is on the regular now, this is redundant. This left some empty space, so I added the health and speed stats of the operator to the card. This gives new players some more information as well as saves veteran players a few clicks if they want to check the health and speed of an operator.

### 4.2.4 | Redesigning Operator Customization

The large amount of layers that users had to click through to customize the different parts of the operators was responsible for a lot of the trouble that older users had with the operator customization task. Despite the transitions between screens being fairly fast, having to transition between different operators still takes a lot of time as users have to deal with multiple transitions and the small load time for elements to appear. With my redesign, I combine all the

subscreens of the customization menu into one condensed screen. The alternate choices for each equipment slot is hidden until a slot is selected. This removes multiple layers and allows the user to view all equipped items on one screen. This method also skips the lengthy process of ascending the screen hierarchy by reducing the amount of times you have to press the back button. Rather than pressing the back button to exit a sub menu, the user can press another equipment slot to jump directly to it. This makes the process of changing menus on the same level to be a lateral movement, rather than an ascending and then descending to the screen, which takes less steps and mouse movement.

# 5 | Summary and Lessons Learned

Through the consistency inspection, heuristic evaluations, cognitive walkthroughs, and user research, I was able to find the general success areas and problem areas of Rainbow Six's UI. For the successes, I found that R6's UI is aesthetically pleasing, and is very consistent with its animations, coloring, and layout. It is also quite easy to get help as different key prompts and information boxes are easily accessible if needed. For the problem areas, R6 has too many layers to go through for the operator customization screens, which is a problem as players customize guns and cosmetics frequently, resulting in a lot of wasted time. The shop pages waste a lot of space due to the preview window taking up half of the screen while showing redundant information. The battlepass's viewing window is too small which leads to navigational difficulties. Also, its UI does not cater to new players as much as it should, with important information being hidden due to the assumption that they should already know it.

I then followed up these findings by addressing these issues in the redesign. I did that by expanding the amount of items on screen for screens with item lists/grids. This helps the user search for items more quickly and, in the case of the battle pass, have a greater spatial

awareness. I also moved information that previously required hover over the item, so that information is more easily accessible at a glance. Another change I did was condensing and combining certain pages together, which reduces the amount of layers in the UI and the number of clicks to accomplish a task.

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# Appendix

## Raw Test Data:

| Operator Customization | | | | |
|---|---|---|---|---|
| No. | Metric | 1.1 | 1.2 | 1.3 |
| 1 | Time | 00:37.42 | 00:37.84 | 00:27.71 |
| | Clicks | 10 | 12 | 15 |
| | Mistakes | 0 | 0 | 0 |
| | Slips | 1 | 2 | 0 |
| 2 | Time | 00:19.57 | 00:40.62 | 00:34.01 |
| | Clicks | 9 | 14 | 17 |
| | Mistakes | 0 | 0 | 0 |
| | Slips | 0 | 3 | 1 |
| 3 | Time | 00:22.88 | 00:30.29 | 00:49.99 |
| | Clicks | 9 | 10 | 22 |
| | Mistakes | 0 | 0 | 0 |
| | Slips | 0 | 0 | 4 |
| 4 | Time | 01:01.27 | 00:56.12 | 01:32.64 |
| | Clicks | 17 | 15 | 26 |
| | Mistakes | 1 | 0 | 2 |
| | Slips | 5 | 3 | 3 |

| Shop Selection | | | | | |
|---|---|---|---|---|---|
| No | Metric | 2.1 | 2.2 | 2.3 | 2.4 |
| 1 | Time | 00:20.62 | 00:17.90 | 00:24.44 | 00:20.90 |
| | Clicks | 3 | 4 | 4 | 3 |
| | Mistakes | 0 | 0 | 0 | 0 |
| | Slips | 0 | 0 | 0 | 0 |
| 2 | Time | 00:14.94 | 00:16.64 | 00:18.56 | 00:15.67 |
| | Clicks | 4 | 4 | 4 | 3 |
| | Mistakes | 0 | 0 | 0 | 0 |
| | Slips | 0 | 0 | 0 | 1 |
| 3 | Time | 00:16.95 | 00:35.72 | 00:22.40 | 00:14.57 |
| | Clicks | 3 | 4 | 4 | 3 |
| | Mistakes | 0 | 0 | 0 | 0 |
| | Slips | 0 | 3 | 0 | 0 |
| 4 | Time | 00:24.04 | 01:36.96 | 01:19.63 | 01:13.31 |
| | Clicks | 4 | 4 | 12 | 6 |
| | Mistakes | 0 | 0 | 0 | 0 |
| | Slips | 0 | 7 | 4 | 6 |

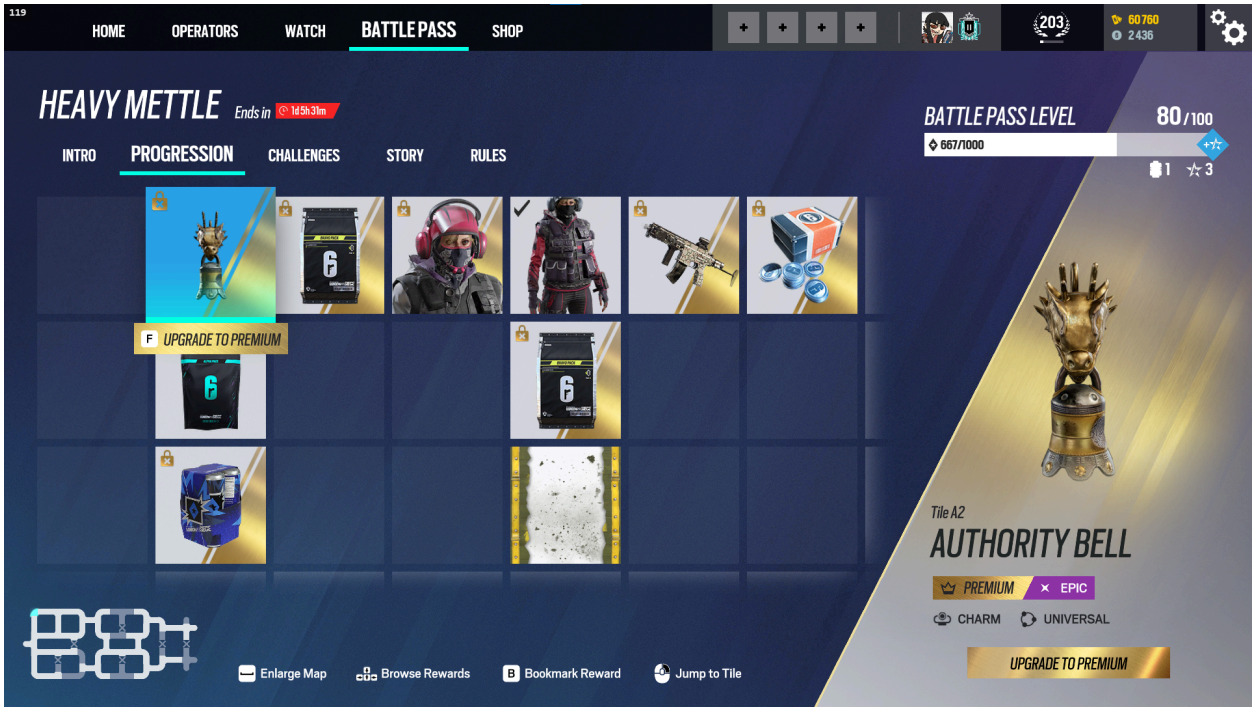
| Battle Pass Navigation | | | | | |
|---|---|---|---|---|---|
| No | Metric | 3.1 | 3.2 | 3.3 | Total |
| 1 | Time | 00:24.05 | 00:43.12 | 00:12.03 | 01:19.20 |
| | Clicks | 1 | 1 | 1 | 3 |
| | Mistakes | 0 | 0 | 0 | 0 |
| | Slips | 1 | 0 | 0 | 1 |
| 2 | Time | 01:15.35 | 01:11.38 | 00:55.96 | 03:22.69 |
| | Clicks | 3 | 1 | 1 | 5 |
| | Mistakes | 0 | 0 | 0 | 0 |
| | Slips | 1 | 0 | 2 | 3 |
| 3 | Time | 00:54.10 | 00:55.53 | 00:32.06 | 02:21.69 |
| | Clicks | 1 | 2 | 1 | 4 |
| | Mistakes | 0 | 0 | 0 | 0 |
| | Slips | 1 | 3 | 2 | 5 |
| 4 | Time | 01:32.29 | 01:24.79 | 01:12.03 | 04:09.11 |
| | Clicks | 1 | 1 | 1 | 3 |
| | Mistakes | 0 | 0 | 0 | 0 |
| | Slips | 5 | 12 | 7 | 24 |

## Full Redesign Document/Diagram (Figma):

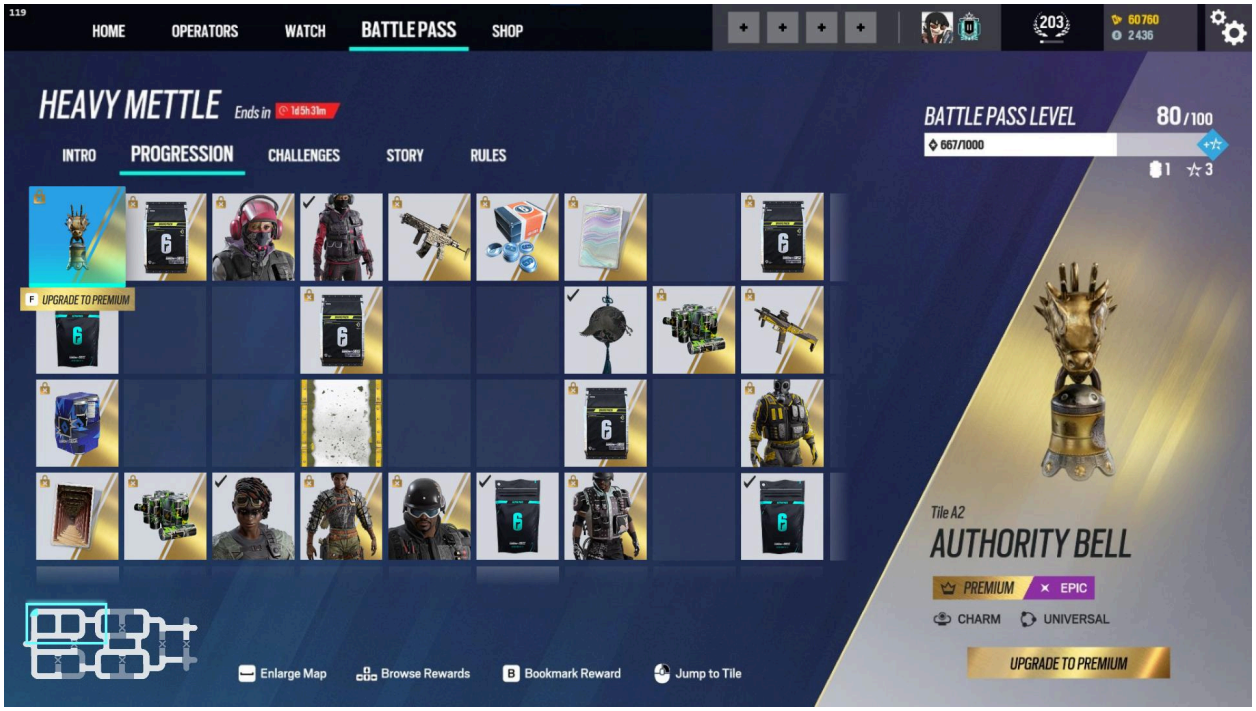
https://www.figma.com/file/rgXO5tRBQ9U5H1eFQk6s6W/Rainbow-6%3A-Siege-Redesign?type=design&node-id=0%3A1&mode=design&t=sASaft1ipXctSTYm-1

## Battle Pass Map:

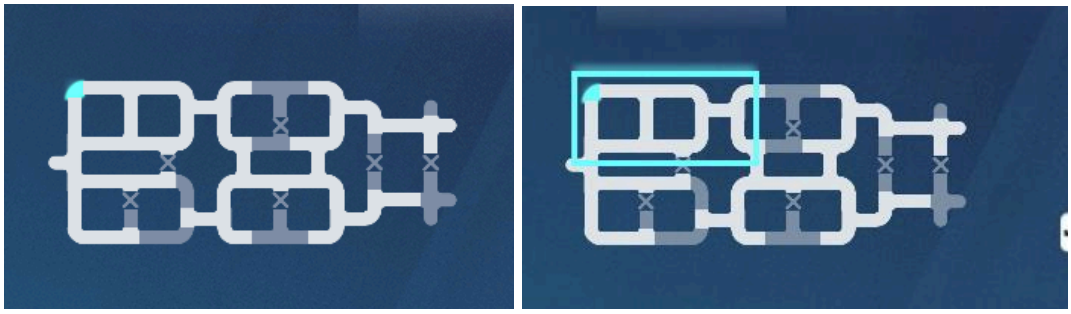
Original:




Redesign:

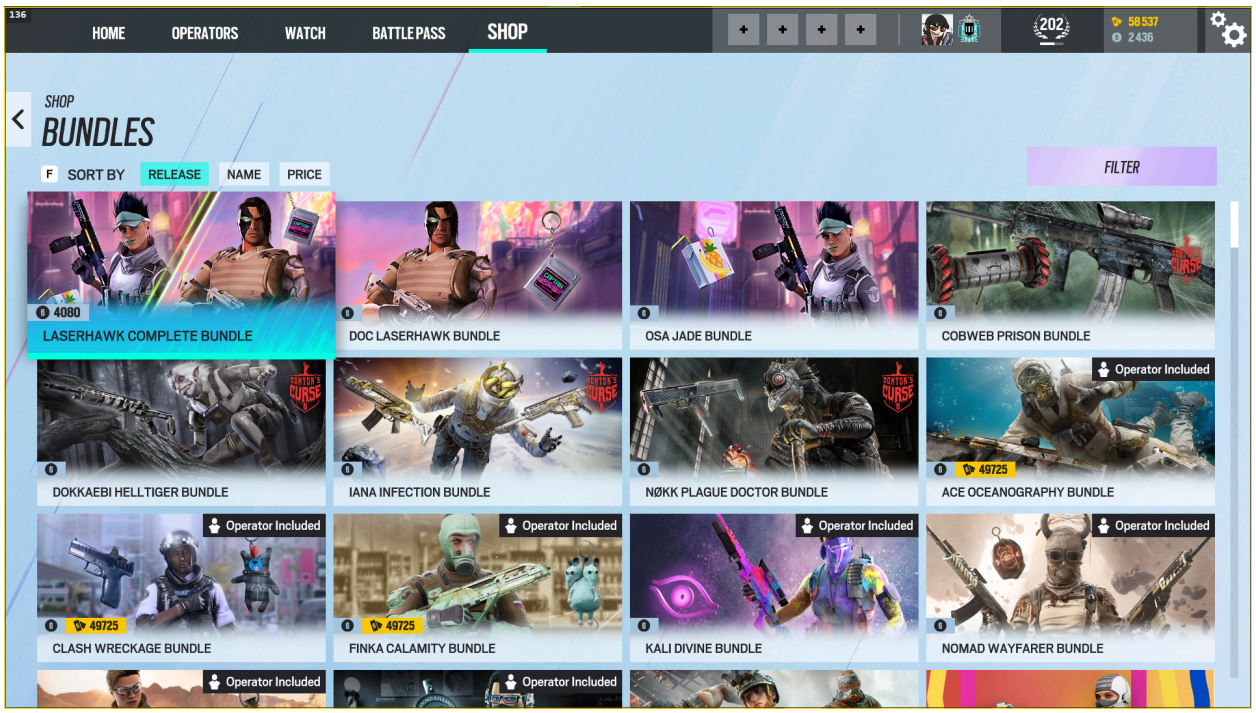


**Minimap comparison**, (Original: left, Redesign: right)

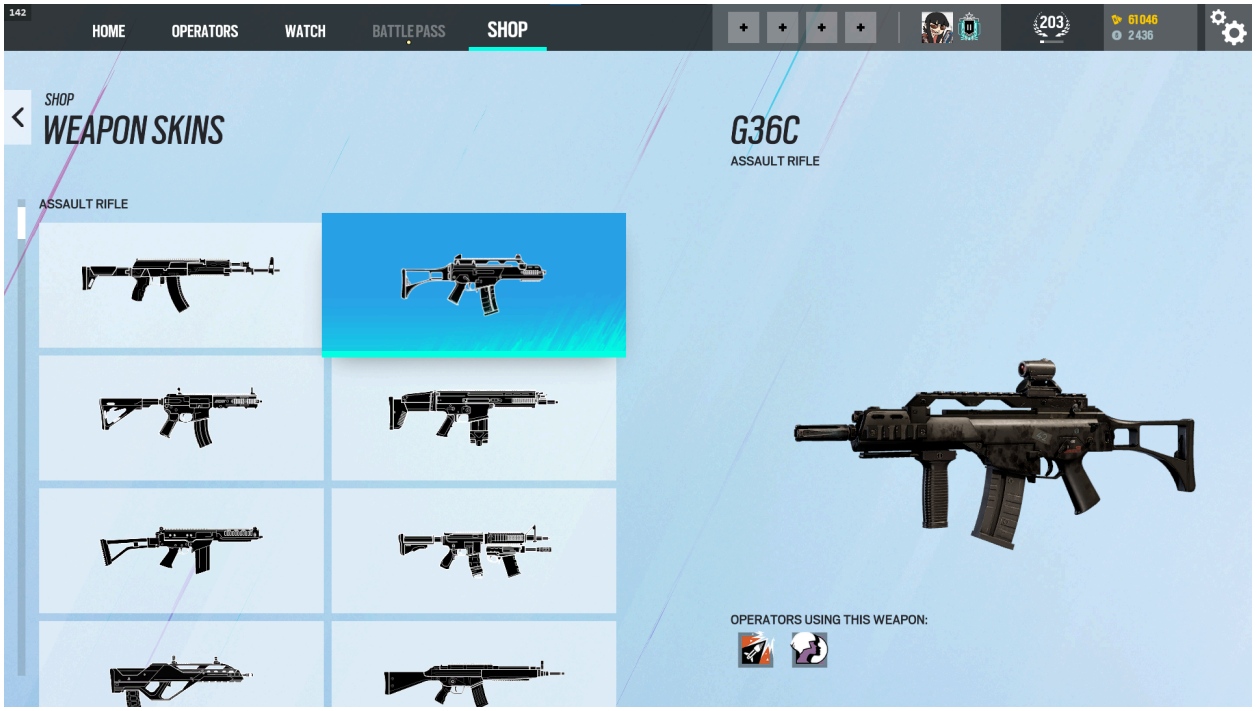


## Store:

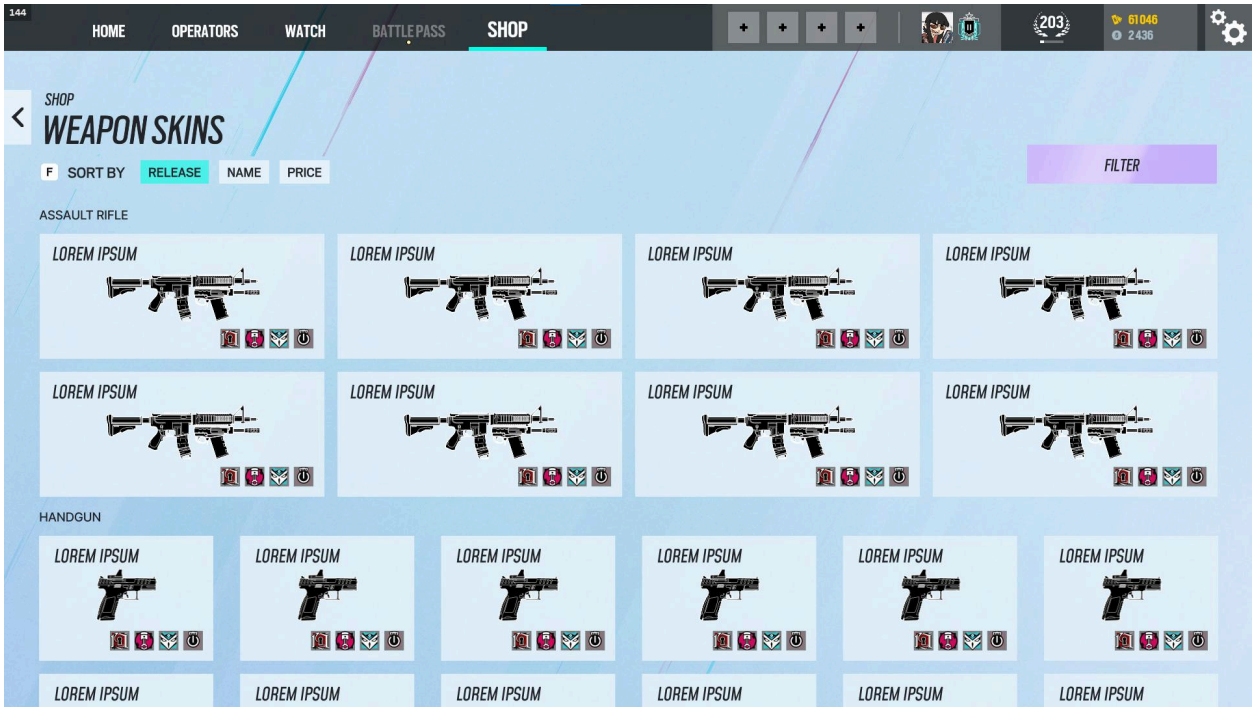
Bundles Screen (Example of what I am trying to emulate):



Original:

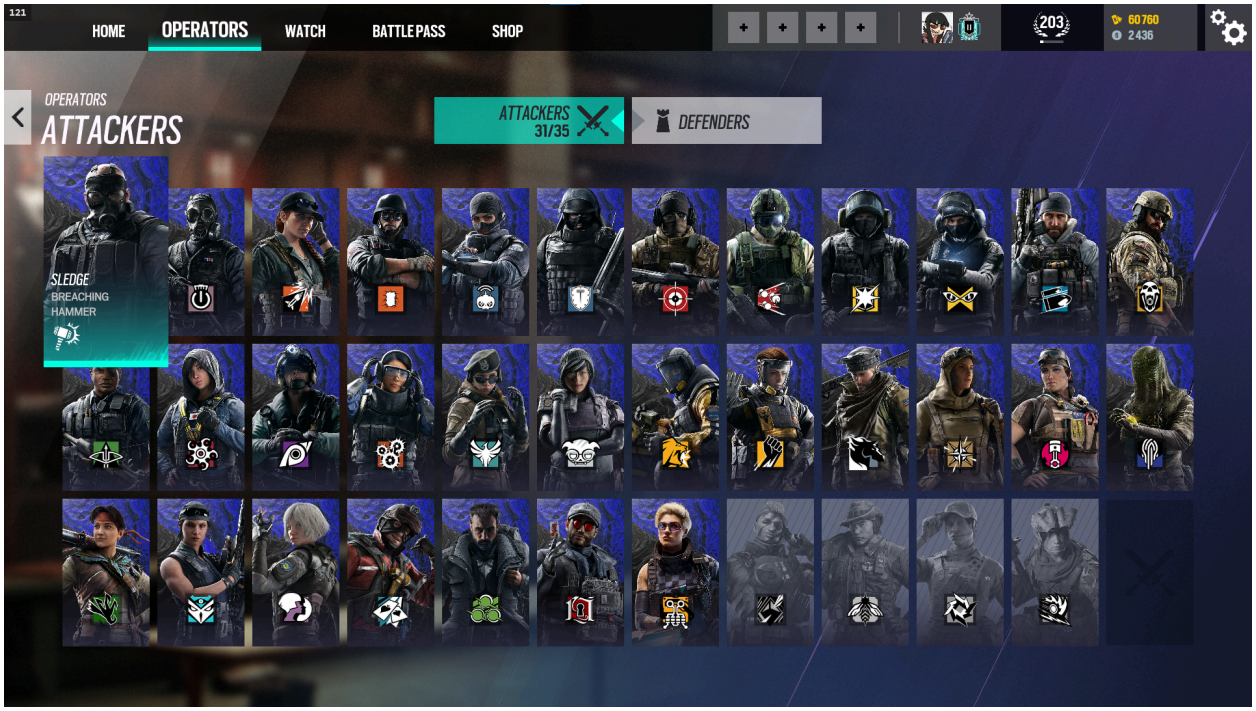



Redesign:

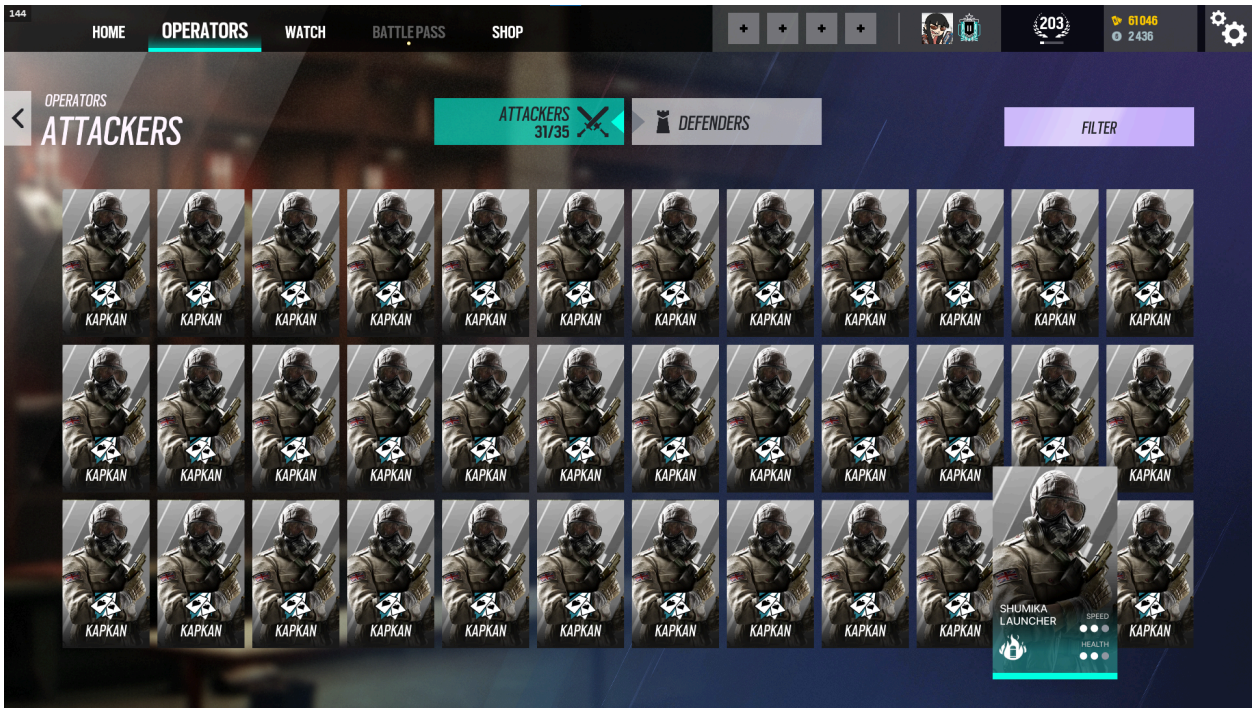


## Operator Select:

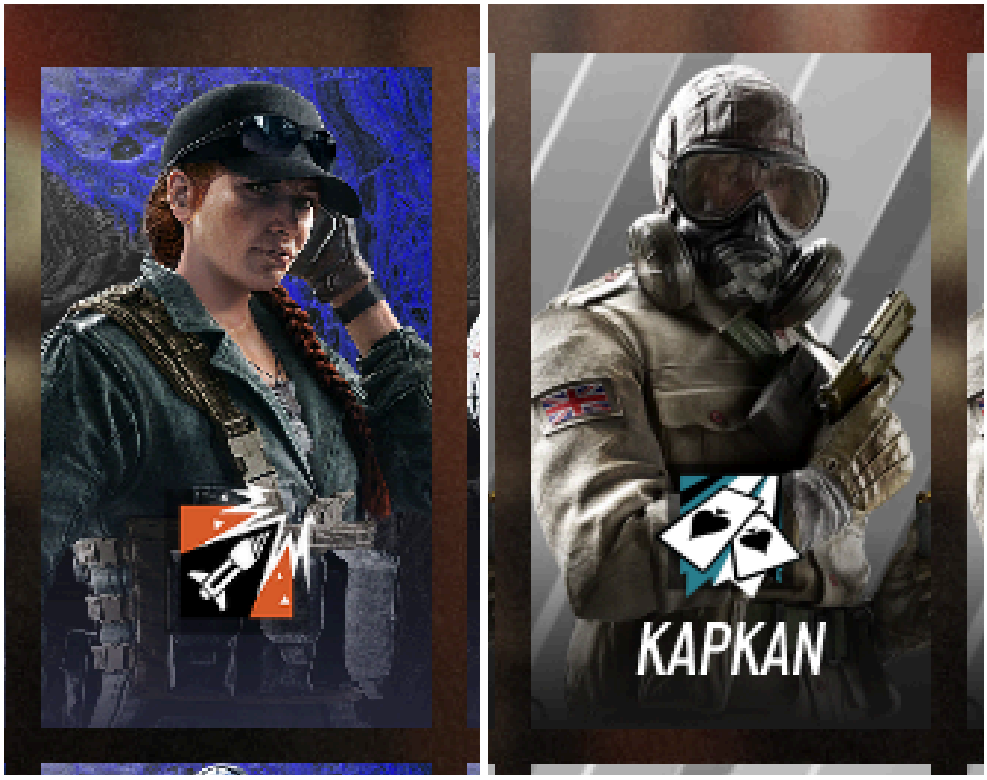
Original:



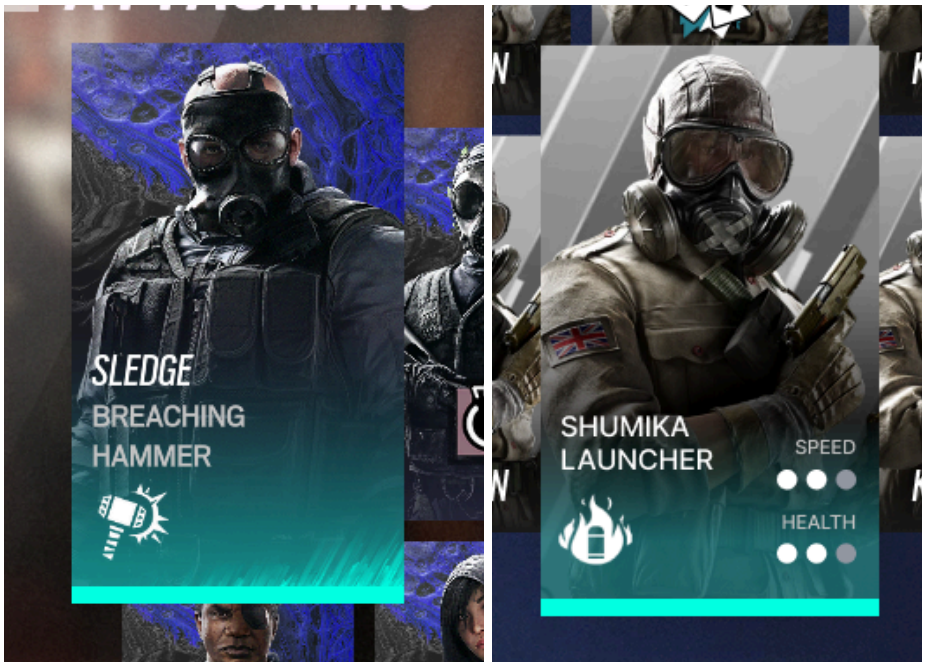

Redesign:



**Operator card comparison** (Original: left, Redesign: right)



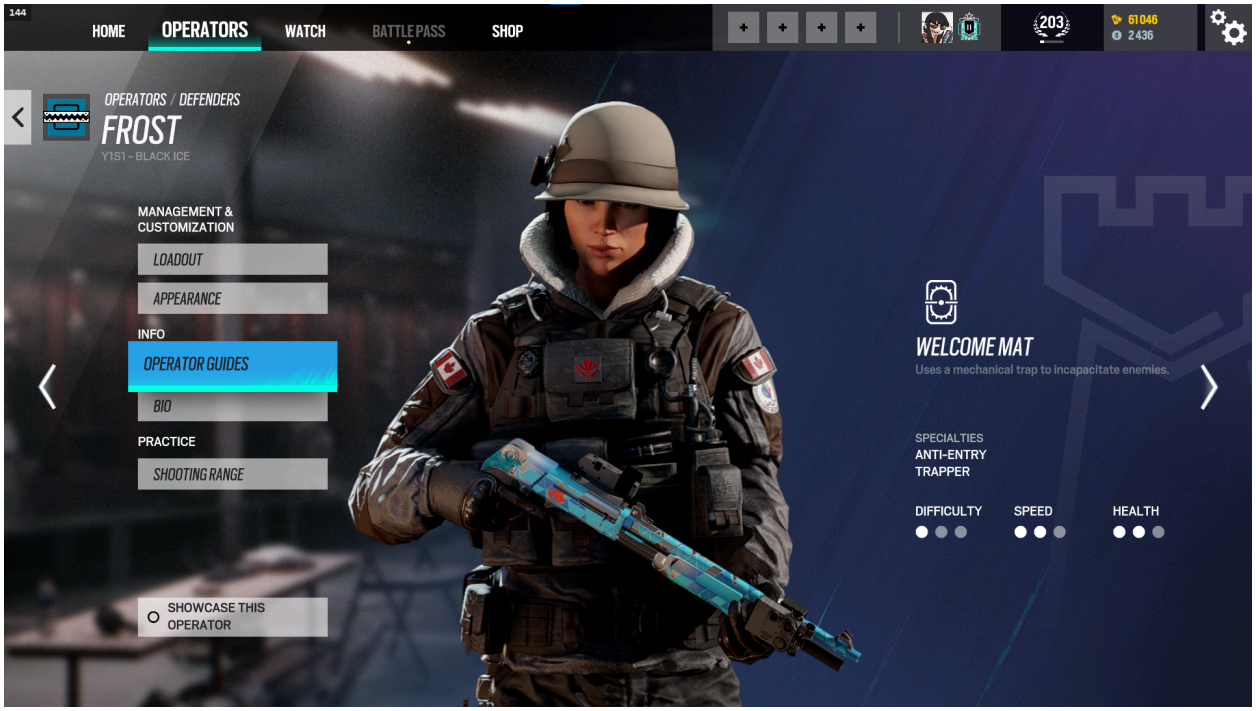

**Expanded card comparison** (Original: left, Redesign: right)



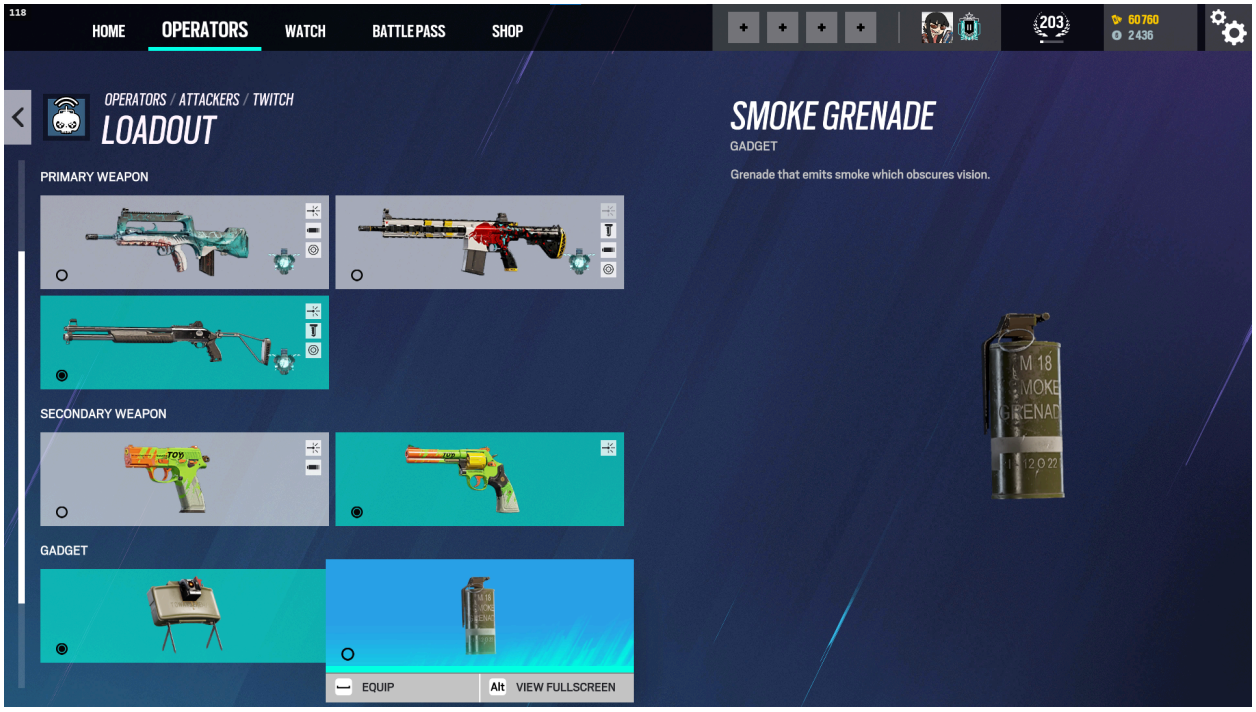
# Operator Customization:

Original:

### Operator Start Screen




### Loadout

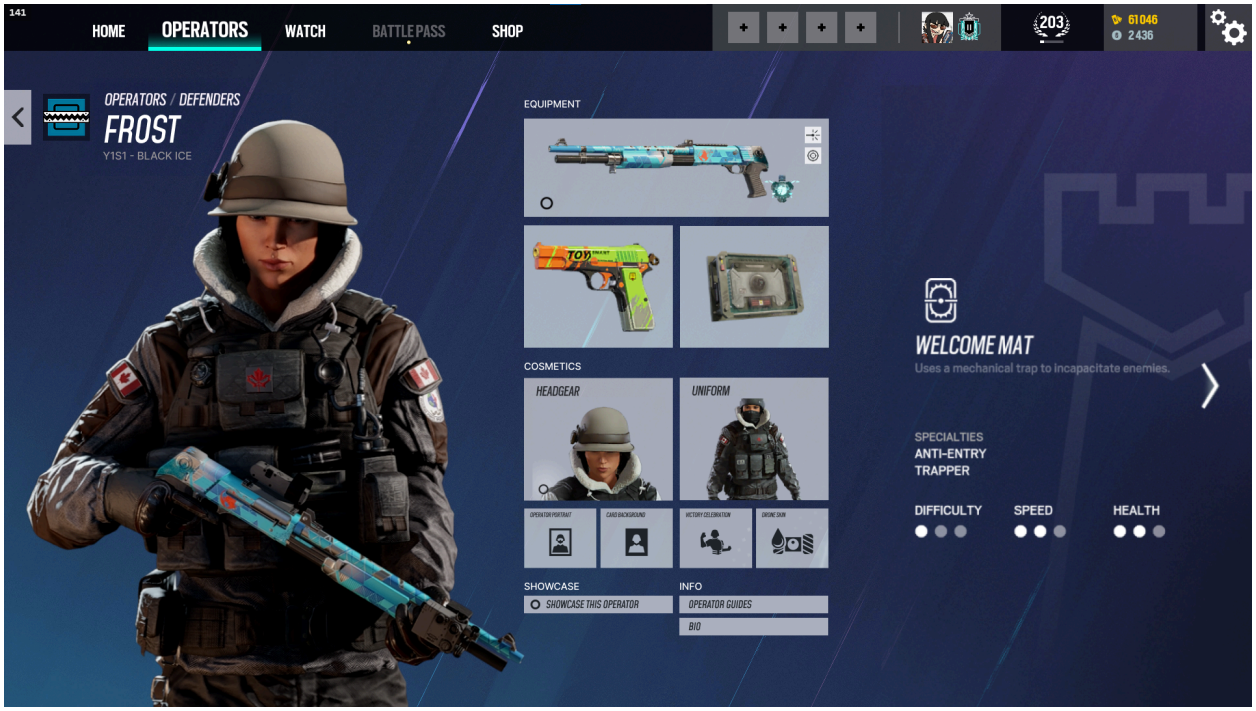


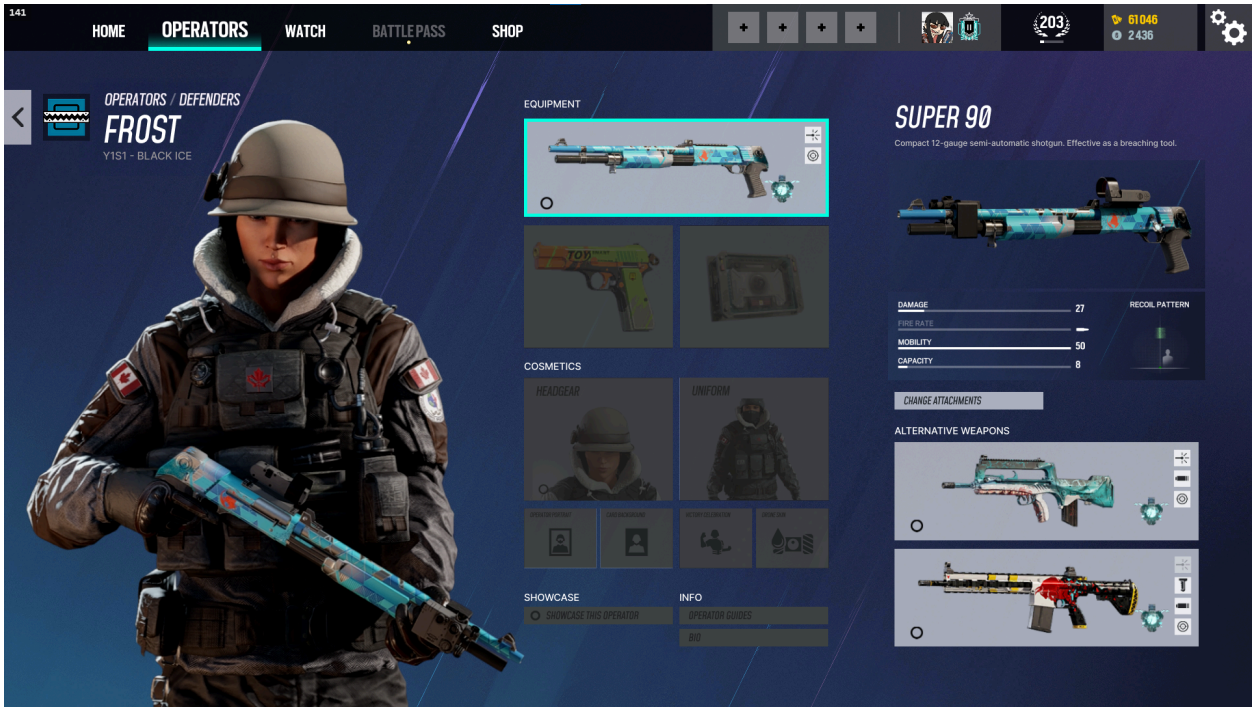
## Cosmetics

## Specific cosmetics

Redesign:

## Customization Start




## Weapon Selection