

Changes

A section on what changes you made to address the review / suggested changes from your mentors reviewed it and suggested changes, plus any other changes you made.

- Changed the metrics to only have preset metrics. Businesses cannot add additional metrics.
- Having different metrics for restaurants and non-restaurants
- Set it up so all columns of a business could be changed at once rather than having to call a function to edit each column at a time
- We have decided to not include messaging on our app and instead focus the time we were going to spend on that on updating styling
- We are going to add sorting by score and sorting by metric for the home page

Nielsen's Usability Heuristics

1. Visibility of system status
 - a. The page users currently are on is underlined in the nav bar so users can easily identify where they are in the app.
 - b. Nav bar updates when business is signed in so they can go to their account page
2. Match between system and the real world
 - a. Navigation bar and search bar are placed at the top of every page like how most sites are set up so it's easier for users to find them
 - b. Use similar terms for account process such as sign in and sign out
3. User control and freedom
 - a. users can change password after creations
4. Consistency and standards
 - a. our business profiles and business listings have the same set up for all businesses with the same labels which are used when a business is created so regardless of what page users are on the app they can easily find the same info at the same places.
5. Error prevention
 - a. We only allow a subset of business types and statuses as a result users are not allowed to type them in, instead they have to select them from a drop down menu
 - b. We have character limits on some fields so for those we put limits on how many characters a user can even type in the html.
6. Recognition rather than recall
 - a. We include placeholders in input fields so users know what to put
 - b. We have markers for required fields in the signup form
 - c. We have clear labels for different fields on our business listings and business profile
7. Flexibility and efficiency of use
 - a. Navigation bar for easier navigation

- b. Users are able to get to specific business profiles from both the home page with the business listings and from searching for specific businesses in the search bar
- 8. Aesthetic and minimalist design
 - a. We do not allow businesses to add additional metrics beyond the preset metrics as we wanted to insure that the information provided by the metrics only connect to relevant covid health guidelines
- 9. Help users recognize, diagnose, and recover from errors
 - a. We include pop ups on the signup page to remind users to input values into required fields
 - b. The search bar shows a message when the business searched does not exist
 - c. Users can cancel changes when editing a profile page
- 10. Help and documentation
 - a. We include a marker for required fields on the business signup page and explain what the marker means at the bottom of the page.

Design Decisions

- Any additional significant design decisions you made when implementing your app. As with the assignments, produce a short and compelling title that summarizes each design question you addressed and detail the alternatives that were considered.(Kylie)
 - **Including a subset of Cambridge's policies as metrics:** Upon reviewing Cambridge COVID-19 laws and policies, we decided it would be best not to include all of them as metrics in our app. Instead, we will include the most effective and universal COVID-19 prevention policies in order to make our app more usable and understandable to users, and to encourage participation in the confirm/deny aspect of our app. To that end, we will include only the guidelines which users can easily determine a business' adherence to, and ones that are common to many business types. For example, some of the Cambridge guidelines are things that cannot be easily assessed by customers (i.e. employee breaks must be spaced out to avoid congregation, etc.) or policies that are applicable to a very niche set of businesses, which isn't very helpful for the purpose of our app so we will leave those out to avoid confusion.
 - **Have different metrics for restaurants and non-restaurants:** The one type of business that stood out for having significantly more guidelines in Cambridge were restaurants. In order to accommodate for that we created a separate set of metrics for restaurants and non-restaurants as we want to hold all businesses equally accountable while still accurately accessing them. We consider having all businesses have the same metrics but we felt that would accurately demonstrate how well restaurants were following covid guidelines.
 - **Not include messaging in our app:** We have decided to not include messaging on our app and instead focus the time we were going to spend on that on updating styling. We felt that metrics were the main focus of our app and as we came towards the end of the project timeline it felt like it would be better to focus our

attention on displaying metrics and styling our app overall to improve our user experience as messaging did not seem integral to our app experience.

- **Add additional sorting:** We are going to add sorting by score and sorting by metric for the home page. As metrics are the main focus of our app we thought it would further emphasize the metrics by enabling sorting by score overall and by sorting score based on specific metrics. We originally considered allowing the user to select multiple metrics to sort by, but since restaurants have different metrics than non-restaurants this could become confusing for the user because they would only see the non-restaurant metrics, which are a subset of the restaurant metrics. For example, if the user decided to sort by all the metrics in the list, they would expect the sorting to align with the total score that is listed for each business, but that is not the case because the total score would include the extra restaurant metrics that are not included in the more general sorting list. We also considered updating the score listed for each business based on the selected filters, but that could also get confusing if the numbers are constantly changing and the math is not intuitive for the user. So, we decided to allow for sorting by one metric at a time for simplicity.

Ethics Protocol Analysis

Imagined Futures

Imagined Future #1: Scope is released. Within several months many cambridge businesses and cambridge residents have created accounts and regularly use the application. Scope has helped encourage cambridge residents to use the services of local business while feeling safe, ask business questions specific to covid, and gives them a means to call out businesses that fail to meet covid guidelines. Scope also helps local businesses increase their number of customers following the pandemic and receive constructive feedback from customers on how to improve their safety procedures or address questions regarding existing safety procedures. The city has a way to keep businesses accountable by looking at business ratings on Scope.

Imagined Future #2: Scope is released. Bad actors can use the app to slander businesses who actually are following safety protocols. Minority owned and/or smaller businesses are disproportionately affected. In order to avoid the bad press or unfair treatment, businesses remove their profiles. Businesses ratings are not accurate so users no longer trust the app.

Stakeholders

- Cambridge Business owners
- Businesses outside of cambridge
- Cambridge city officials
- Federal and state officials
- Cambridge residents
- People of color
- People who are part of a minority group

- Elderly people
- Young people
- Smartphone users
- Non smartphone users
- Scope users
- Non scope users
- Large businesses
- Small businesses
- Workers in cambridge businesses

Identify Values

- Outcome
- Process
- Structure

Value-Laden Design Decisions

- How are businesses evaluated for how well they are following COVID-19 safety protocols?

Possible Choice	Values promoted?	Values demoted?
Have users provide an overall rating of how comfortable they were visiting this business	Process: easy for users to give and understand feedback about a business	Structure: business led by minority groups or in certain areas of city lose revenue Outcome: ratings are more subjective
Allow businesses to add arbitrary metrics (not from a preset list)	Process: allows businesses the freedom to choose whatever metrics they prefer	Outcome: businesses promote metrics that are irrelevant to COVID and/or contradictory to COVID guidelines Structure: businesses that don't add certain custom metrics could be penalized even though they're following the rules
Certified users determine the overall rating	Outcome: more vetting against users with bad intentions against a business	Structure: gives more of a voice to groups with more privilege in society Process: less opinions are taken into account in final evaluation
Only allow businesses to add metrics from a preset list	Outcome: businesses can only promote metrics that are relevant to COVID Process: metrics are consistent across the board	Structure: businesses that can't afford to implement optional metrics will look bad even though they are following the necessary precautions

All businesses have the same list of metrics by which they are evaluated. They cannot add or remove metrics	Outcome: businesses can only promote metrics that are relevant to COVID Process: metrics are consistent across the board Structure: all businesses are evaluated the exact same way	
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- How are businesses held accountable for how well they are enforcing COVID-19 safety protocols?

Possible Choice	Values promoted?	Values demoted?
Automatically notify city if businesses are not following the rules	Outcome: city can easily be notified if a business is not following the rules	Process: Bad actors can be really detrimental to businesses Structure: could disproportionately affect businesses with fewer resources
Show how often users agree/disagree that a business is following a given rule	Process: all customers can give feedback about a given business Outcome: businesses do not face drastic punishments and can easily recover if a given metric has a lot of “disagrees”	Structure: could disproportionately affect certain businesses as a result of customers biases

- How do we inform customers of their business options?

Possible Choice	Values promoted?	Values demoted?
Color-coded map based on how well the business is following rules	Process: easy to quickly find business that are following the rules	Outcome: users choose to congregate in areas where the business have better colors Structure: areas with lower amounts of businesses will appear to have more bad colors than that of high numbers of business
Business listings with the option to filter based on a rating that is displayed on the listing	Process: easy to quickly find business that are following the rules Outcome: less likely to congregate based on location of good businesses Structure: each business is evaluated individually rather	

	than by location or proximity to other businesses	
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- What is the default evaluation of businesses with new profiles?

Possible Choice	Values promoted?	Values demoted?
Start with a safety score of 0%, which will change once they start getting confirms/denies on their metrics	Process: all businesses will start with the same initial score	Outcome: misleading if you don't realize that there are no ratings yet Structure: businesses with lower populations or traffic will have a low score for longer
Start with a safety score of 100%, which will change once they start getting confirms/denies on their metrics	Process: all businesses will start with the same initial score	Structure: businesses with lower populations or traffic will have a high score for longer Outcome: misleading if you don't realize that there are no ratings yet
Start with an undefined safety score, which will change once they start getting confirms/denies on their metrics	Process: all businesses will start with the same initial score Outcome: clear to the customers that this business has yet to be rated	Structure: businesses with lower populations or traffic will have an undefined score for longer, and customers might not want to visit a business until it is rated

Choose & Justify

- How are businesses evaluated for how well they are following COVID-19 safety protocols?
 - Choice: All businesses have the same list of metrics by which they are evaluated. They cannot add or remove metrics.
- How are businesses held accountable for how well they are enforcing COVID-19 safety protocols?
 - Choice: Show how often users agree/disagree that a business is following a given rule so that all users can provide input while still allowing businesses to easily improve their circumstances.
- How do we inform customers of their business options?
 - Choice: Business listings with the option to filter based on a rating that is displayed on the listing so that customers can evaluate business in a more case-by-case manner.
- What is the default evaluation of businesses with new profiles?
 - Choice: Start with an undefined safety score, which will change once they start getting confirms/denies on their metrics.