Heuristic Evaluation of Vesta

1. Problem

Vesta is a voice controlled intelligent audio assistant for your smartwatch that seeks to augment the mundane tasks of your life with music.

2. Violations Found

1. **[H2-10: Help and Documentation][Severity: 3][Found by: A,B,C]**

   The help button on every page is distracting and takes up too much valuable screen space. If the user wants to get help about a screen, other than talking to Vesta, maybe there is some sort of swipe or gesture you could do to take you to a help page. Furthermore, if there is a help button (the question mark) on every screen, it should be more tailored toward that each specific screen.

2. **[H2-8: Aesthetic and Minimalist Design][Severity: 1][Found by: A]**

   The back button on every page is a little unnecessary and takes up too much screen space. This may have been a product of limited resources with Marvel, but swiping could mimic the 'back' function.

3. **[H2-2: Match System and World][Severity: 2][Found by: A]**

   The three navigation buttons on "Vesta Listening" page do not make sense on that page. I think it would make more sense to move those to the initial home screen where users can navigate the unspoken area of the app without telling Vesta that you are about to speak.

4. **[H2-2: Match System and World][Severity: 3][Found by: A, C]**

   The settings leads to the "moods" page, which to me, was not intuitive. After playing around I realized that this must be the "edit moods" page. One way to fix this could be to add a button onto your navbar that says "moods" instead of a settings icon.

5. **[H2-2: Match System and World][Severity: 2][Found by: A]**

   Green submit button on artists page should probably lead to music player or back home
   It was to my understanding that you press this green submit after editing a mood's playlist, so I would either want to be directed to the music player so I can listen to that mood or back to the home screen.

6. **[H2-7: Flexibility and efficiency of use][Severity: 4][Found by: A, B, C]**

   We thought the task flow surrounding the settings/moods pages was confusing and not intuitive.
   The

   entire process was not explained well and we felt as a user we did not know all of the different

functions or how to use them. See below some of the separate problems we found and decided to condense into one problem.

-Similar to how you can add a new mood in settings, you should be able to add a new genre/artist to that mood in addition to adding a new song to that playlist via the playlist view. This would speed up processes if you can't link to apple music. For example, you can just add an artist to a genre/mood instead of just song by song on the playlist view.

-The blue "playlist" and "import" side buttons in settings are awkward, giving their respective pages an asymmetrical look. I assume this is supposed to mimic a swipe in Marvel, which would be my suggestion for the hi-fi (use a swipe) with an indicator on the screen (an arrow maybe?). This will be easier to position if help and back buttons are gone.

-The mood, genres, and artists views seem to have too many different circles that are not formatted nicely. Maybe this is because I am not used to iWatches with their zooming properties, but these pages just seems cluttered to me with multiple shapes, colors, and functions to be done. I think taking into consideration previous suggestions (such as omittance of help and back buttons, more hidden import button, etc.) this page will be much less cluttered and maybe this is less of a problem. To me, though, I would want these circles more in a grid format so that you can scroll or swipe if you have many different moods.

-After selecting a particular mood we have to select a genre of music before seeing the artists available. If the music is solely based on what the user has imported from Apple Music/Spotify then they should already have an idea of which artists belong to which mood. They can select artists spanning multiple genres to fit their mood. The fix is to remove the genre screen.

-On the screen with moods, there is another button called "import." Intuitively, "import" should import a new mood (?) but instead, it gives the user an option to import music. To fix this, there could be a label more descriptive than "import," or perhaps there can be more specific information about this in the help screen.

-When selecting a mood or music, there is a green checkmark button at the end of the flow. Not only is this checkmark confusing, but so is the rest of the flow. Why does clicking on a mood lead to a genre and then an artist? This could be something that is explained in the help window.

7. **[H2-4: Consistency and standards][Severity: 1][Found by: A, B]**

Blue navigation buttons at bottom of screen are too small. It should be obvious to the user that these are navigation buttons and that should be the standard. Making these larger would stand out to the user that they are main functions in the app.

8. **[H2-8. Aesthetic and minimalist design][Severity: 0][Found by: A]**

Half-circle buttons seem awkward; it is not aesthetic to me to have these half-circles at the bottom of the screen, especially if they are not flush with the edge of the device. Maybe a different shape or just playing around with the curvature of the circle can make it look cleaner.

9. **[H2-3. User control and freedom][Severity: 2][Found by: A, C]**

One thing I found missing was the ability to view and edit current alarms that you have set. When you click the alarm button, maybe before asking to submit about a new alarm, you can view currently set alarms that you can edit/delete from there.

10. **[H2-8. Aesthetic and minimalist design][Severity: 1][Found by: A]**

In general, I thought the font was a bit too small. With the screen already being so small, the font needs to be reasonably large for the user to easily and quickly read while navigation through the app.

11. **[H2-9. Help users recognize, diagnose, and recover from errors][Severity: 0][Found by: A]**

I know for med-fi prototype this was not an issue, but it would be nice to see a view where Vesta doesn't know what command you are asking with your voice. A screen that lets the user know that Vesta did not understand and is waiting for clarification, kind of like a Siri help page.

12. **[H2-2. Match between system and the real world][Severity: 0][Found by: A,C]**

Vesta helps track your waste while doing mundane tasks that require resources such as washing the dishes or showering, but how does it know which one you are doing? If the user cannot use audio to tell Vesta, you can add a page before the timer page that prompts what activity you want and lists a handful of the common ones for the user to just tap.

13. **[H2-8. Aesthetic and minimalist design][Severity: 1][Found by: A, C]**

The timer page (while it's running) has more information than is necessary. I think just including the countdown clock and a large red stop button would suffice and make it look cleaner.

14. **[H2-8. Aesthetic and minimalist design][Severity: 1][Found by: B, C]**

The logo superimposed onto the microphone image on the home screen is a little bit jarring and unnecessary. It would be better to simply display the logo since the next screen clearly demonstrates that Vesta is listening to you, in the form of sounds waves.

15. **[H2-5 Error Prevention][Severity: 2][Found by: C]**

When the user is on the help screen, the text along the bottom reads "Start talking to VESTA" and links the user to the home screen when clicked on. The user then has to click the logo before

actually being able to speak to Vesta. This can be fixed by having the text link to the listening screen.

16. **[H2-6 Recognition rather than recall][Severity: 2][Found by: B, C]**

The energy score only comes up once in the entire application. It seems like a good idea but superfluous without further integration into the rest of application. I would add a more specific help screen or remove this function altogether.

17. **[H2-8 Aesthetics and minimalist design][Severity: 1][Found by: C]**

The prototype contains multiple low resolution images that have been blown up so much that they appear grainy. The simple fix is to get more high resolution images for the hi-fi prototype.

18. **[H2-4 Consistency and standards][Severity: 3][Found by: C]**

The alarm for an event notification features two buttons on the bottom, snooze and dismiss but the button for accepting the event is more difficult to spot, it's the music symbol. The fix is to switch the buttons on the bottom to the same check and x design seen elsewhere in the application.

19. **[H2-4: Consistency and standards][Severity: 2][Found by: B]**

The music icon used to select a song for the timer is slightly unintuitive since it doesn't look like a button; also, the symbol itself seems to be typically used as an icon rather than a button.

20. **[H2-10: Help and documentation][Severity: 1][Found by: B]**

Why is the icon for water used a partially filled glass? App should consider using a more intuitive icon.

21. **[H2-3: User control & freedom][Severity: 2][Found by: B]**

If the app is focused on the voice, instead of always having a help button, maybe there should always be a button available for voice commands.

22. **[H2-5: Error prevention][Severity: 2][Found by: B]**

When selecting the number of songs and estimated time for the timer, the two editable fields should be larger in order to avoid missed taps. In addition, instead of just fields, they could perhaps be scrollable options, in order to avoid any error on input.

23. **[H2-1: Visibility of status][Severity: 0][Found by: B]**

Since the main screen is plain, it wouldn't hurt to have a short message that describes what you are currently doing it (such as doing chores for __ more minutes, currently playing music for your ___ mood, etc.)

3. Summary of Violations

Category	# Viol. (sev 0)	# Viol. (sev 1)	# Viol. (sev 2)	# Viol. (sev 3)	# Viol. (sev 4)	# Viol. (total)
[H2-1: Visibility of Status]	1					**1**

[H2-2: Match Sys & World]	1		2	1		**4**
[H2-3: User Control]			2			**2**
[H2-4: Consistency]		1	1	1		**3**
[H2-5: Error Prevention]			2			**2**
[H2-6: Recognition not Recall]			1			**1**
[H2-7: Efficiency of Use]					1	**1**
[H2-8: Minimalist Design]	1	5				**6**
[H2-9: Help Users with Errors]	1					**1**
[H2-10: Documentation]		1		1		**2**
Total Violations by Severity	**4**	**7**	**8**	**3**	**1**	**23**

4. Evaluation Statistics

Severity / Evaluator	Evaluator A	Evaluator B	Evaluator C
sev. 0	75%	25%	25%
sev. 1	57%	43%	43%
sev. 2	38%	50%	38%
sev. 3	67%	33%	100%
sev. 4	100%	100%	100%
total (sev. 3 & 4)	75%	50%	100%
total (all severity levels)	57%	43%	48%

5. Summary Recommendations

Overall, the UI of the app seems pretty good. However, a lot of the naming and flows were a little confusing. We think that in general, a lot of the flows could be simplified, and many of the screens could have more specific naming. For a smartwatch app, we wouldn't want to have a steep learning curve – we want to be able to use it from the first time we open it. We're also sure that many smartwatch users feel the same way. Therefore, one of the most important things is to focus on simplicity. As a result, the general help button is not necessary for every screen, and the back button can either be mimicked by a swipe, or a similar button that does not have a gray box around it. Also, the settings/moods pages, which we realize are not necessarily the main part of your 3 tasks, were not super intuitive. To us, we were not sure what we were supposed to do in these pages and how we were supposed to edit the moods, genres, artists, and playlists. As for your main 3 tasks, we thought playing music was very intuitive and clean. For setting alarms, we thought that there should definitely be a way to view/edit your current alarms and that there was too much information on the notification. In addition, for your timers task, there was a little bit too much information on the screen while completing your task (maybe should either just be the music player or a countdown clock). Lastly, some of the buttons on the notification were not consistent/in the right place (i.e. music icon to accept).

Your medium-fi prototype was pretty awesome! We had to try really hard to come up with these criticisms, but we really do believe that if you can fix a lot of these issues, your final product will be *that* much better.

Severity Ratings

0 - don't agree that this is a usability problem
1 - cosmetic problem
2 - minor usability problem
3 - major usability problem; important to fix
4 - usability catastrophe; imperative to fix

Heuristics

[H2-1: Visibility of System Status]
- keep users informed about what is going on

[H2-2: Match Between System & Real World]
- speak the users' language
- follow real world conventions

[H2-3: User Control & Freedom]
- "exits" for mistaken choices, undo, redo
- don't force down fixed paths

[H2-4: Consistency & Standards]

[H2-5: Error Prevention]

[H2-6: Recognition Rather Than Recall]
- make objects, actions, options, & directions visible or easily retrievable

[H2-7: Flexibility & Efficiency of Use]
- accelerators for experts (e.g., gestures, kb shortcuts)
- allow users to tailor frequent actions (e.g., macros)

[H2-8: Aesthetic & Minimalist Design]
- no irrelevant information in dialogues

[H2-9: Help Users Recognize, Diagnose, & Recover from Errors]
- error messages in plain language
- precisely indicate the problem
- constructively suggest a solution

[H2-10: Help & Documentation]
- easy to search
- focused on the user's task
- list concrete steps to carry out
- not too large