

Spotify is a music streaming service used by millions. Users have access to millions of songs and podcasts, from artists and creators worldwide. It can be used on various platforms, including smartphone, desktops, smart TVs, and web browsers, which allows users to stream music from anywhere in the world. Spotify has two versions, a free version with ads and a premium version without ads but with a monthly subscription fee. The free version is quite limited, only allowing users to skip songs a certain amount of time and having close to no control over the playback (e.g. shuffle play). Meanwhile the premium version, which this text is going to focus on, has significantly more features. From this point forward, any reference to Spotify refers specifically to Spotify Premium due to my inadequate experience with the free version. Spotify is many people's preferred music streaming platform because of its key features outclassing their competitors. Spotify offers users a search function to find a specific song, genre or artist which they can play immediately. They make the user personalized playlists like Discover Weekly (gives new music recommendations) and Daily Playlist (blends favorites and new suggestions), using sophisticated algorithms. Spotify also allows you to search up other users and look at their playlists.

In my personal opinion spotify has a few different groups of end users. All users practically use Spotify for the same reason, aside from podcast listeners, but with slightly different intentions and preferences. I have categorized them as the following:

- **The casual listener:** Users who occasionally listen to music in their free time, often not having a specific music taste, rather listening to what is popular at the moment. They tend to only have the free version of Spotify.
- **The active listener:** Users who have the premium version of Spotify and regularly listens to music or podcasts. The users use multiple platforms to stream music, and have some music preferences and some go to genres. This user only uses Spotify to listen to music and tends to listen almost every day.
- **Music Enthusiasts:** Users who really enjoy discovering new music. They like creating playlists with niche genres. They know more songs than the average listener and there is rarely a day they go without using Spotify.
- **DJs / Music Producer:** Users who work with music and therefore use Spotify to find new songs that they can use professionally.
- **Podcast listeners:** Users who only really use Spotify to listen to podcasts.

These categories can be split into several different sub-groups, and users may fall between them or belong to multiple. However, as a general grouping I believe most of Spotify's users can identify themselves with one of these categories. In this assignment, I'm going to focus on the Music Enthusiasts because I believe that Spotify isn't fully optimized for them.

In this text the five steps of "The Requirements Definition Process" presented in the book *Modeling Users: Personas and Goals* by Cooper, A., Reimann, R., Cronin, D. and Noessel, C. (2014), are used to create a persona and a scenario for music enthusiasts that uses Spotify.

Step 1: Create problem and vision statements

A big struggle Music enthusiasts face with Spotify is discovering new music. While Spotify has features like the Discover Weekly playlist, they don't meet the demand for users that want to listen to more niche and unique music. When Spotify recommends music it's often mainstream songs that the user is familiar with or songs that don't match the users music taste. That's why Spotify is in need of an updated design of its music discoverability features, which would allow music enthusiasts to discover new artists, genres and songs effortlessly. Which leads us to the second step of the requirements definition process.

Step 2: Explore/brainstorm

Exploring solutions in this stage of the analysis becomes inevitable. Some solutions that came to my mind were the following. Joinable genre specific communities inside of Spotify that users could join to share and explore music with others. This feature could be similar to Reddit, allowing users to filter the feed by new, most voted, and trending, while also giving them the option to upvote posts they like. Another option is for Spotify to use user data to create multiple weekly playlists based on the user's most-listened-to genres, featuring only songs they haven't heard before. User data could also be used to recommend other users with similar listening patterns, for you to follow. An improved search function with several filters wouldn't either be bad. Filters for artist popularity, release date, subgenre, mood, amount of plays, and BMP, would make it simpler to find new music.

Step 3: Identify Persona Expectations

In this step we will be creating a persona which belongs to the user group of music enthusiasts. We will make her as realistic as possible and identify her expectations.

Ellen, 21 years old, is an outgoing university student that uses Spotify daily to listen to music. She listens to music at every opportunity, whether she's on the bus to school, working out at the gym, studying, or cooking dinner. She enjoys finding rare or under-the-radar artists to share with friends, as well as creating playlists for specific moods or activities, such as working out, relaxing, or hosting small house parties. She is very into specific subgenres of house music like progressive house and deep house, but she also likes rap and pop. Ellen expects Spotify to have an intuitive suggestion system that takes her listening history into account, such that Spotify would be in tune with her mood and music taste. For example, having Spotify recommending her different songs and playlist for mornings compared to evenings. She would also like the ability to filter recommendations by genre, mood, and artist popularity level, so that she herself also could more easily find new music.

Step 4: Construct context scenarios

We will explain how a normal, ideal day in Ellen's life would look like if Spotify was optimized for her.

Ellen begins her day as usual, opening Spotify on her way to university. Still being sleepy she wants something upbeat yet not overwhelming to listen to. Spotify has recognized this pattern

from her listening habits and automatically suggests a “Morning Energy” playlist filled with a mix of progressive house tracks that helps her ease into the day. As she listens to the playlist, she discovers a couple of new tracks from underground artists that she hadn’t heard before, perfectly matching her taste.

When Ellen arrives at the university library to study, Spotify seamlessly adjusts her music recommendations to a selection of ambient and deep house tracks that will help her focus on her assignment without being distracted by lyrics or too much intensity.

Finally, while cooking dinner after an intense day, Ellen wants to relax with some more chill music. Spotify once again recognizes this and suggests a mellow evening playlist. This playlist offers her both the relaxing ambient sounds she likes as well as new tracks she can share with friends later.

Step 5: Identify design requirements

In the last step we will break down the design requirements into data, functional and contextual categories. This will build a foundation on what could be done to better Spotify for our persona.

The data requirements represent the objects and information that must be handled in the system, including the data types that need to be represented. All music tracks have to be categorized by genre, artist popularity, mood, and more attributes, like tempo, energy and play count. Spotify needs to take into account every users’ listening history, this includes favorite genres, frequently played tracks and recently played songs, as well as save information on which device and at which location the user is using it.

By handling data in this way the functional requirements could be achieved. Spotify could better their automatic playlist curation, by generating daily playlists for different activities (e.g. for working out and studying), time of day (morning, evening) and mood. They should enable users to filter recommendations by genre, mood and artist popularity level. Better song recommendation system for playlists is also crucial, as well as better profile recommendations.

The contextual requirements are the relationships between data sets and the environmental context. As mentioned, the data should be processed so that Spotify can adapt to the users different activities throughout the day by adjusting the music selection based on the context. Contextual playlists should emphasize the users’ usual mood by their own routine. For Ellen that would be energetic playlists in the mornings and at the gym, and more relaxed tracks while studying or doing her evening routine. Spotify should recognize when Ellen is switching between different environments and devices. Therefore, Spotify would have to gather contextual data such as location and device. The interface should allow the user to easily switch between curated playlists or manually filter for specific recommendations without needing to navigate multiple screens. While moving from place to place, the interface should be simplified for quick interactions, whereas while at home or studying, the user should have more control over the playlist curation process.

From a business perspective, Spotify's recommendations and playlist algorithms should prioritize promoting emerging artists while still satisfying user goals, providing an experience to the users that makes them feel like their tastes and preferences are understood and valued. This could as well as potentially lower the cost due to mainstream artists getting less exposure, also reinforce its brand as a personal music curator for music enthusiasts.

That concludes the requirement definition process. From my experience working with Ellen's persona, I found that scenario-based design is a highly effective tool in understanding the user's daily journey. I got the practice to think beyond just individual interactions and to consider how Spotify fits into a persona who is a music enthusiast. Particularly, it helped me see the bigger picture, on how Ellen uses Spotify differently throughout the day, depending on her activities. Therefore, I had to imagine beyond Spotify's existing features and limitations, a more adaptive system that responds to Ellen's needs automatically. I enjoyed the ability to imagine without any technological constraint. It made me think more creatively, which in my opinion is one of the biggest strengths of this approach. Another clear benefit is that I really emphasized with Ellen. By walking through her daily experiences and goals, I got to understand her needs and how I could optimize Spotify for them. The Requirements Definition Process also forced me to focus on high-level goals before diving into specific features. This helped me to not get caught up in technical details too early in the process. For example, I didn't have to worry about how playlist algorithms would function, I could simply focus on the fact that Ellen's primary goal was to discover new rare music that fits her mood throughout the day. Then I was able to define the design requirements around her needs, such as mood-based playlists based on her listening history and an advanced filtering system.

However, I'm not of the opinion that this method is perfect. For example, one drawback I noticed was that it's hard to base the scenario in reality when you're not thinking about how things will be implemented. Especially, considering how Spotify would need to intuitively know Ellen's mood or adapt to her changing routines. Additionally, this method limits one to only think about one persona, which in this case was a 21 year old music enthusiast. In my opinion, using this method, you can get lost in very specific user groups that maybe aren't the companies biggest target groups. Casual listeners or podcast enthusiasts might have entirely different expectations of Spotify, and adding the mentioned tweaks could worsen their user experience. The method lacks consideration on how we should weigh different personas to each other. There is no explanation how we should compromise the different personas needed to get the highest satisfaction rates.

In the Article *Scenario-Based Design*, by Rosson. Mb and Carroll. J. found in *The human-computer Interaction Handbook: Fundamentals. Evolving Technologies and Emerging Applications* (2013), Scenario Based designs is described as popular due to the following: "When designers are working through ideas, they want to make progress quickly, so that they can obtain feedback and continue to refine their ideas". I however, am in the opinion that the design I used found in the book *Setting the Vision: Scenarios and Design Requirements* (Cooper. A ... 2014) could use another step to better quick progress and continuous feedback.

I would add a step in between the second and third step. This step would be named “Comparing different personas to the problem”, and it would involve weighing different user groups from your persona with the problem. The purpose of this step would be to get an understanding if the problem you have come up with in the first step affects different user groups differently, and therefore is even worth trying to fix. For example, I would compare the impact my persona's solution to her problem would have on relevant user groups, like active listeners and podcast listeners. If the impact would be mostly negative for other relevant user groups, a reevaluation should be made. This should be based on what you find to be your most important user group and on how big of a problem this is for the user group you made the problem around. If you come to the conclusion that this will cause more harm than good for your company overall, there is no purpose in continuing the process. However, if you find that your solution does not affect other user groups or that it's worth compromising to solve this problem, then you can continue to the next step.

Overall, I'm fond of the scenario creation steps, but I think implementing a reality check midway through the process would save time and focus the designers mind back to reality.

References:

Chapters 3 “Modeling Users: Personas and Goals” and 4 “Setting the Vision: Scenarios and Design Requirements” in the book by Cooper, A., Reimann, R., Cronin, D. and Noessel, C. (2014). *About face: the essentials of interaction design*. John Wiley & Sons.

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