# Digital Dorm Light

User and Domain Analysis, Project Two

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## Executive Summary

We started our research by meeting with our stakeholders to better identify the goals of our product. In addition, we have studied competitor and literature reviews of competitive products before and after the stakeholders meeting.

Later on, we have started conducting focus group interviews where the main categories of our questions were finalized. The individual interviews also ensured that questions about the emotional aspect of the users were asked.

Due to possible inaccurate self reporting in focus group interviews as well as individual interviews, we have added the direct observation method to confirm our findings.

Using the process of persona development for our product design, we created a step-by-step analysis that resulted in the creation of 3 personas based on specific user roles. Underneath each persona, a list of the users' goals can be found.

In discussion of the Context Scenarios and Requirements, after noting and evaluating the various formations in which they could take, we decided that a combination of two separate ideals would be utilized in execution: Persona based, and Critical Requirement based scenarios. By merging the two into one vehicle, it allows for a more thorough read of any obstructions or setbacks which may arise in the development of our product, while the latter of the two also take the position of being a formidable recap.

Utilizing the information our team gathered from both the stakeholder meeting and the user persona goals, we identified four experience attributes that conveys the values of the digital dorm light: Accessible, Personalized, Durable, and Modular.

## Concerns + Risks

Most of our concerns are in regard to overall team synchronization and effectiveness, especially in terms of meeting regularly and maintaining communication with one another. Since we are all 'online' now, it may be more difficult for us to meet as easily as we did on campus.

## Product Overview + Project Parameters

The Digital Dorm Light is a portable light fixture that attaches to any surface and can be controlled through an app. It may be integrated with other portable light fixtures to work as a single unit for greater illumination and the ability to display programmed patterns. Originally this idea came to life to address the issue of mental health and how it is essential to have adequate lighting in a dorm room, where many college students spend large portions of their day.

Before the design process officially began, there were a few early concerns; the two main conflicts were choosing a revenue or cost-focused approach, and understanding of the problem between our team and our stakeholders.

Our team initially started out with cost-focused goals, specifically in terms of cost-reduction. Because the main idea of the product was to target those who may struggle with a chronically dark environment, Team Brooklyn wanted to create something economically accessible. It also felt important to our team to make the product cost-effective since the primary audience was college students. After meeting with stakeholders, our approach has since switched to a revenue-focused one with a much broader audience.

With respect to 'understanding of the problem,' the idea for the Digital Dorm Light stemmed from those who may suffer from seasonal depression due to living in areas with unfavorable weather, such as Rochester, New York. Mental health was a topic Team Brooklyn really valued and wanted to address with our product. Because of this stance, though, Team Brooklyn was concerned there would be a lack of understanding between our team and our stakeholders. In no way did our team insinuate that this product would be a *cure* for clinical depression, but rather a supplemental product that would help improve a contributing factor of it - poor lighting conditions. However, the plan to drive our project goals with the idea of mental health has since changed after meeting with our stakeholders.

## Research Methods + Rationale

We have conducted different types of research in order to better understand our user group and stakeholders. The types of research we have done are: stakeholder meeting, competitor and literature review, and different types of user interviews - focus group interview, individual interviews, and direct observation.

- **Stakeholder Meeting**

The stakeholders are people who will largely influence our product -- the Digital Dorm Light -- design because they fund, build, test, market, sell, and support the product. For our stakeholder meeting, we met with the marketing, engineering, sales stakeholders, senior executives, and subject matter experts. The purpose of this meeting was to engage these relevant stakeholders in this early stage of the design process of our product. Before the stakeholder meeting, the marketing requirements document (MRD) was prepared and the stakeholders had access to the MRD prior to the meeting. Our team drafted a list of questions to ask the respective stakeholders. Every member of our team was taking notes so that we could compare the notes after the meeting and compile all of our notes. In addition, we had additional audio and video recording as a backup.

First, our interaction designer - synthesizer (IxDS), Joshua Newton, started the meeting with some general questions that are applicable to all stakeholders to open up the conversation. By keeping the meeting conversational, the team is not only establishing a good relationship with the stakeholders, but that would also make them more comfortable in sharing their thoughts. Then, our industrial designer, Nadine Eldallal, asked some specific questions to our marketing shareholders and senior executives. Our interaction designer - generator (IxDG), Carolina Lion He, shared questions for the engineering and sales stakeholders. The questions for the subject matter experts were asked by our visual designer (VisD), Joshua Choi. Lastly, our team lead, Lauren Allende, ended the meeting with some closing questions.

Through this stakeholder interview, we understood the direction of the Digital Dorm Light and what are the expectations for this product. For instance, there were features of the product that we never really thought about, but were really important to the stakeholders. Overall, this meeting was very necessary at the early stage of design to ensure that our team was moving towards the right direction. Based on the information of this stakeholder meeting, we were able to identify the most suitable research methods for our user interview.

- **Competitor + Literature Review**

The concept of the Digital Dorm Light is not exactly new. In fact, there are existing, but

separate products that have similar functions as the Digital Dorm Light. For instance, as for the modular light concept, there is an existing product called the “Modular touch LED lights”, but it mainly serves as an LED modular light. There is also a sunrise/sunset simulator alarm available on the market, however, this product mainly serves as an alarm and the lighting is very limited.

The Digital Dorm Light aims to take these two main pieces of technology and advance it to the next level. The Digital Dorm Light will be modular pieces that could allow the users to assemble as they wish. In addition, the light pieces can also be attached to the walls. There would also be a personalized setting of different lighting to accommodate different times and moods of the day (for example: sunrise and sunset simulation, purple lighting for sleep mode, and more customizable options for the users). Furthermore, the Digital Dorm Light would contain a power setting from high to low and users would be able to control that setting according to their preference at the time.

Through the competitor and literature review process, we sourced a list of products with existing functions and we read through different research articles, watched usability videos, and looked through the technical specification documents. Through this process, we were able to identify the features that we would implement to the Digital Dorm Light, how our product could differentiate ourselves in the pool of existing products and further think about the innovation aspect for the Digital Dorm Light.

- **Focus Group Interview**

We conducted a focus group interview to start with our user research process. The purpose of the focus group is to observe whether the Digital Dorm Light idea was viable. The people we interviewed were screened beforehand. They had to be one of our identified roles for our product: room owner, caretaker (room decorator/setter), and roommate. We also considered important factors/multipliers that were concluded from our stakeholders meeting. Some of these factors were: college students living on campus, parents who want to decorate their kid’s room, mental health and general wellness factors, space for the installation of lights, and more. By diversifying our panel of interviewees, we were aiming to receive different thoughts but also to observe some common trends between all users.

The purpose of the focus group is to create conversation between all the interviewees and the three of us would be stimulating conversations. In order to do so, we need to ask questions that will give us information about their interaction behaviors and emotions/feelings without directly asking what they want. When users are not asked to give specific pieces of data but thoughts on their experience, they are

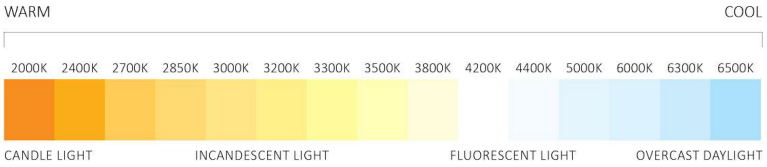
more likely to open up to conversation. Two people were assigned to take notes and also bring up any relevant questions as well. In order to not overwhelm the interviewees, the note-takers were sitting behind them.

After our introduction, we kicked off the focus group interview with a poll: “Do you own any additional lamps?” and then we proceeded to dive deeper by utilizing discussion leads with the poll results.

As seen below, our discussion leads are open-ended questions that everyone should be able to answer or further elaborate on:

- How many of you have additional lights in your room (additional to the University-installed lights)?
- *Give color scale handout* Are any of these colors representative of the lights in your room? If so, how does that color/those colors make you feel?
    - Have you ever felt that the lights in your room have affected your mood? Or have affected your ability to study, productivity, etc.?
- How do you interact (turn on/off) with your light on a day-to-day basis?
    - Has there been any moments of inconvenience/convenience?
- (When buying a light, is there any feature you value the most or particularly look for?)
    - Maybe battery powered vs. plugged in, etc.
    - Is there anything that would influence you to buy a particular light product (i.e. sold through the University of Rochester)

Something unique to note during the focus group interview is that we handed out the color temperature scale and asked where the interviewee to select where their light bulb color lie on the chart as well as what lighting do they usually prefer when performing different types of tasks (such as sleeping and studying):
In the case that there is no natural conversation flowing from the focus group, we also prepared




different discussion starters to help aid the process. But we did not use many of these discussion starters since the focus group conversation flow was great.

- **Individual Interviews**

The individual interviews were quite evenly distributed between the team members. We made sure that each interviewee had a different living environment. This is because through the focus group interview, we were able to further identify and conclude our list for individual interviews. Similar to the purpose of focus group interviews, the individual interviews are conducted to avoid group dynamic problems that may occur in a focus group. In addition, the individual interviews will allow for greater detail of individual behaviors.

The questions asked in the individual interviews were further narrowed down after the focus group interview. The questions prompts/topics discussed were:

- What lights do you own?
- Color temperature
- Interaction
- Features
- Feelings

As the Digital Dorm Light has a component of improving general wellness and mental health, we also asked more in-depth about the feelings of these individuals during this portion. We chose to do that in the individual interviews because we did not want to ask more private questions in a group setting.

- **Direct Observation**

We realize that there might be inaccurate self-reporting in the focus group interviews as well as the individual interviews. To further research and confirm the accuracy of these results, our interaction designer - generator, Carolina Lion He, conducted direct observation in different spaces on campus that requires the user to interact with light. She was also able to carry on a consented observation by observing her roommate interact with the lamps as well as the main light of their dorm room.

Here is the list of spaces:

- Computer Science Majors Lab
- Douglass Commons conference rooms
- Carlson Library Quiet Floor + Discussion Floor
- Rochester Human-Computer Interaction Lab

## Research Findings

- **Stakeholder Meeting**

During the stakeholder interview, we were able to identify the factors that were important to the stakeholders and we had to make some changes from our original plans. Unlike in our marketing requirements document (MRD), we shifted our product from a cost-focus approach to a revenue-based one. In addition, we were mostly aiming this product to a college student population, but the stakeholders have expressed their interest in reaching out to a larger user base. This means that we will no longer be serving only college students, but also other demographics. With this in mind, we had to adjust and expand our identified roles. (Note: Our user interviews were conducted with college students due to the time limitation we have and the population we have access to. In a more realistic setting, we would have more focus groups that are of different demographic backgrounds.)

Due to the shift to being a revenue-based product, our brand identity is no longer the economic and affordable one - we upgraded to being a luxurious product with a low-cost entry price to purchase the basic unit but add-ons for

paid health features and more upgraded premium features. Due to this, having a very personalized experience is important.

The stakeholders have also expressed their strong desire in launching an impeccable product in the market late in order to avoid the replication of different competitors. This means that our timeline will be more flexible because of the higher standards.

- **Competitor + Literature Review**

Through reading and analyzing different competitor and literature reviews, the important point we realized is that even though the concept of our product is not exactly new; we are innovative in the sense that we are merging two key pieces of existing product concepts into one product, and our mission in helping improve the general wellness and provide adequate lighting at a reasonable starting price. While other products have similar functions, they do not connect to this larger mission of bettering general wellness and mental health - which we have identified as important during our stakeholders meeting.

Through this process, we have found out that we need to find other ways to better identify ourselves in the pool of competitors. This is why we have catered our findings and implemented these ideas to our focus group interviews, and used different models to analyze our findings for the individual interviews.

- **Focus Group Interview**

During the focus group, we were able to identify important categories that are aligned with the Digital Dorm Light. The important categories identified were: color temperature, interaction, features, and feelings.

In summary, the preferred color temperature for activities that require more attention (such as studying), is cooler, brighter lighting. On the other hand, the warmer lighting is preferred when one wants to wind down (such as sleeping at night or relaxing). Interaction-wise, convenience is really valued. This comes down to the different light switch options to be placed in different locations (this is also talked about more in detail in the direction observation section).

There is also a common interest seen in a smart technology connection with the Digital Dorm Light. This might also be because the generation we are looking at, grew up in a digital era. Even if they did not grow up in the digital area, they have acquired technological skills because of the current digitalization in progress in our society. Features is the section where people have more diverse opinions.

The common desired features are customization and eco-friendliness of the product. Quality and price ratio is also something that was brought up. However, there were different preferences when it comes to the battery-powered product or a cord-plugged product.

Again, we have included questions about feelings and have discovered that people preferred to study in brighter-lit areas, which is not their room.

- **Individual Interviews**

Through the individual interviews, we were able to identify similarities and differences of the usage across individuals. As we have already pointed out, our main categories of questions are: color temperature, interaction, features, and feelings.
Besides summarizing the individual interviews, we have also used different models to prove and present our results.

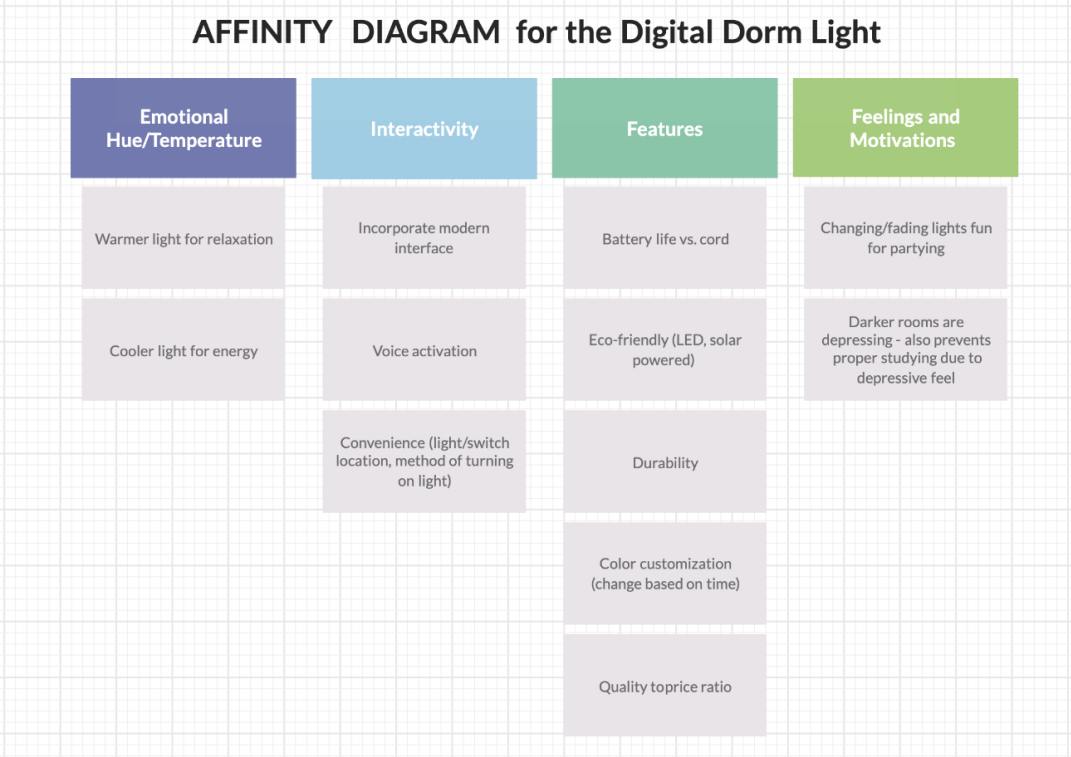
**Cross-Case Analysis:** The cross-case analysis lists the similarities and differences. It is analyzed in a more concise format and it is organized in a table for convenience in comparison.

**Affinity Diagram:** While being a little easier to navigate, the choice of affinity diagrams may also be really well suited to our preferable modeling type because the process can be both messy and semi-spontaneous.

Again, affinity diagrams split the modeling into individual criteria sets, albeit slightly altered because the criteria sets focus more on categorization rather than chronology. By assigning innovations in either a taxonomic or group role(s) cluster format, each person within the group could focus on a singular one assigned to themselves and continually add on underneath their respective category.

*Cross-Case Analysis*

| | Similarities | Differences |
|---|---|---|
| Color Temperature | Cooler light is more energetic + better for focusing or working; warmer light is preferred for a calmer situation (i.e. at night to sleep or relax) | Cool light (i.e. light blue) is preferable for <u>most</u> situations [J] |
| Interaction | Convenience is key, especially with location. Usability via voice command, an actual controller, or an app is preferable. If there *is* a switch, it needs to be at a "good vantage point" for use [F].<br>Easy interface | |
| Features | Customization (timer settings, color-changing ability)<br>Eco-friendly (solar energy, LED, etc.)<br>Reaction to sound [J, L]<br>Durability + practicality<br>Quality - price ratio [F, L, C] | Practicality - using cords to plug lights in [L, C] vs. battery powered [N]<br>- Common complaint is that battery life is often short and it's more expensive to have to repurchase multiple times<br>Price |
| Feelings | Not common to study in dorm rooms because they're not very bright and can be depressing [N, J]<br>- Not a lot of natural light available<br>Changing the lights can be fun for entertainment like partying or pregaming [J, L] | |




*Affinity Diagram*

- **Direct Observation**

Through direct observation, we have found out that the most common light switch on campus is a motion sensor light switch - this has an automatic sensing capability that would turn on the lights once sound is picked up. People have shown some signs of irritation when the light is switched off when they sit down and no sounds have been made for 20 minutes. These motion sensor light switches work best in public spaces because people are usually constantly walking in and out of that space.

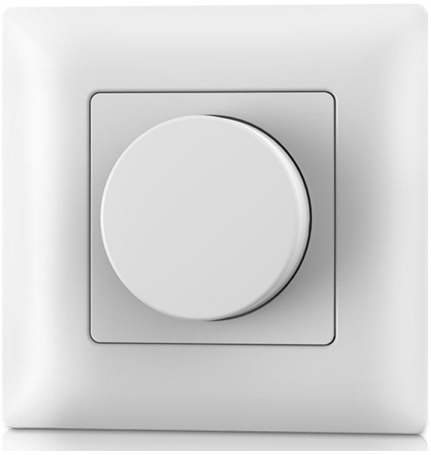
As seen in the picture below, this type of light switch also has the problem of unintuitive usage. Because there is no feedback in whether the switch is turned on or off, people end up pressing it constantly and it takes a while for them to realize how the light switch works.

This type of light switch is most suitable for a living space, this could be incorporated to one of the light switch options available on the Digital Dorm Light.

Another type of light switch is the regular light switch used in the dorm areas as well. Below is a picture to depict the two types found in the dorm areas on campus.

The one that I conducted my direct observation was the light switch on the left. Because there are no smart technology-equipped light switches on campus, my roommate needs to walk to the light switch, turn it off, and then walk back to her bed.

As for the her desk study lamp, it is a dimmer roller light switch:



This light switch is inconvenient for her to use since it is not intuitive for her whether she should switch left or right. However, the bright

white LED lighting really helps her in her studying because she feels the most productive working in this lighting. The longest I have observed her working with only those lights is for 5 hours.

She also uses a USB-charged lamp that has a very cute shape of a bird. However, that lamp can barely last for 30 minutes. She can only use that lamp for very short reading time before bed time. However, she definitely enjoys the interaction with the touch based switch though. The lamp has three brightness intensity, and she would be able to tap up to three times to change it.

## Personas

In our process of developing personas, we followed a few steps; firstly, our team started out by identifying and dividing our interviewees by their user roles, so that each persona could correspond to a specified role. Following that, we began highlighting the behavioral and demographic variables suited to each role we identified through utilizing continuums, which naturally follows to execute the following step; matching the interviewees to those variables by a process of mapping them on to the continuum we had created. Then, it became easier for the team to discern the various potential patterns from the outcome, and explain how the links between them came to be. After these patterns were particularly established, the team began to define some possible goals for the interviewees based on the data they had, along with a few added steps of grooming including clarifying significant differences between their goals, grouping and prioritizing the potential ‘personas’ as needed, along with adding detail where deemed necessary.

This all in effort to reach our final and most important step; developing a story, or in other words an imaginary narrative, for each persona based off of the data we had collected and grouped, along with listing some conveyed goals of each person that were also based on the data we had.

**Elizabeth Wilson, Interior Designer**

Elizabeth, who in college was surprisingly a psychology major, made a career out of her passion for interior design. At just 27 years old, she managed to start her own company; **Wilson Interiors**, that provides high end interior design services for real estate.

Since she was a psychology major, Elizabeth is well aware of the importance of lighting choices in the interior design process, as it immensely affects the client's mental wellbeing. Therefore, she lists indoor lighting manipulation and design as a specialty of hers and the company. She often gets complaints from her clients when they are asked about their old interior design concerning bad placement of the lighting in the space, in addition to the fact that bedside lamps and floor lamps take too much space and are impractical. Some also have issues with interactivity, but the most comments she encounters are related to the shape and feel of the lights.

Elizabeth strives to invest in some kind of supplying partnership with the biggest and fanciest furniture and housing equipment in the market to serve her company's brand image. Because she realises the psychological benefits of good lighting to her designs, her clients and more importantly her reputation, she tried to supply her clients with randomly produced lighting products and has failed to find something that perfectly tailors to their needs, and even to what she has in mind. Therefore, she is particularly on the lookout for a unique luxurious lighting production company to work with in the future, that can offer her the perfect solution.

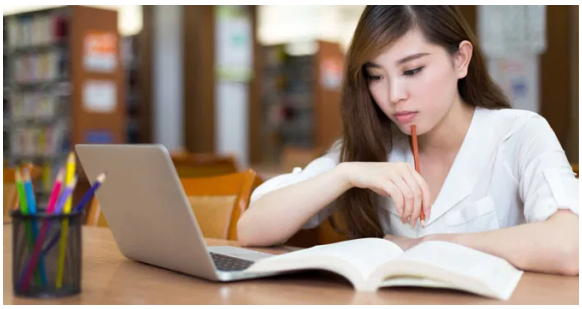
**Elizabeth's Goals:**

- **Providing high quality/luxury design aspects for clients:** Elizabeth's target audience is of the high class socio-economic group and the market is highly competitive, so a high quality product that adds to her design is always a top priority.

- **Investing wisely:** After all, Elizabeth is just starting up her business and cannot suffer major costs, her company is willing to invest with producers of high quality products but with the success of the product ensured first.

- **High brand profile in a competitive market:** Elizabeth worked hard to develop her company into existence, and one of her main goals is to keep innovating and further developing the company's brand image so that it has a known and respected status in the competitive market for interior design.

**Vanessa Day, College Student**



Not exactly new to the college experience, 19-year-old Vanessa is a sophomore at a small college in upstate New York. She is a biomedical engineering major and takes her studies very seriously. Accustomed to dorm life, she definitely has opinions on the state of her room, both in the past and present.

With a major such as BME, much of Vanessa's coursework is demanding and time-consuming, not to mention stressful. Such vigorous work often presents a challenge for Vanessa: finding a calm and amiable environment where she can get through her studying efficiently without taking a toll on her mental health. However, her dorm room is not quite a poster child for this kind of ideal setting. She frequently has difficulty focusing on schoolwork at the desk in her room because there is not enough natural light or the dorm lights are too dull, inhibiting her ability to see well.

Additionally, she finds the dorm lights themselves to cast an unsatisfying yellow light on the room, which she describes as providing a "depressing feel."

Vanessa truly values her workspace as well as her living space. Because of this, she is on the lookout for a product that would spruce up her dorm room and provide more light for studying, as well as everyday activities and tasks. This would improve not only her mental wellbeing but her ability to complete schoolwork in a comfortable area, especially when the on-campus library is too distracting or inconvenient to access.

**Vanessa's Goals**:

- **Enjoy the shopping experience:** Looking for dorm decorations (such as lights) should be enjoyable, not stressful or frustrating.

- **Find a favorable quality-price ratio:** Quality is important for Vanessa, primarily because she is shopping for her own room and customization is key. However, she is also a college student and likes to be conscious of how much she is spending.

- **Hassle-free packaging and storage:** Since Vanessa is not an in-state student, it is important that she finds a light product that she can easily pack up in a storage unit at the end of the semester.

- **Durability:** She still has at least two years of college left, so she needs a product that will last for the remainder of her college experience (and, ideally, even longer than that).

**Bob Clark, Stay-At-Home Dad**

Bob is a stay-at-home dad and his wife works full time as a piano professor at The Juilliard School. Bob was a music production professor at Juilliard but decided to become a stay-at-home dad after their daughter was born. The family lives in the Manhattan neighborhood Tribeca, where they often take daily evening walks around their neighborhood with their two dogs, and their daughter in a stroller. During their evening walks, Maya would not be able to see them properly due to the darkness at night. They have been trying to find string lights that they could hang around Maya's stroller but the only decent ones were the ones that require electricity plug-ins. The ones that are chargeable barely last for 15 minutes and then the light brightness is too dimmed.

Their daughter, Maya, was diagnosed with Asperger's Syndrome, which is why the family ultimately decided to home school their daughter until she reaches the age to attend elementary school. Bob has been closely working with an educational and family therapist to develop educational plans for Maya.

Maya has also displayed a deep interest in music as she would sit in their Lang Lang Black Diamond Model D Steinway and Sons piano and spend hours playing different notes. As the model comes equipped with SPIRIO | *r*, a resolution player piano, Maya would immediately try to play the notes when Bob plays the exclusive playlist recorded by Lang Lang.

As Maya is growing older, the family has been trying to finalize the set up for her independent room. Since she will be homeschooled until elementary school, she will be spending a lot of her time in the house. At this age, Maya is still afraid of the dark at night, which is why they are taking great importance to the room's light set up. When setting up Maya's room, Bob knows that she will be bound to change the look of the room when she grows older. The family wants Maya to have that freedom to do so in

the future, so they are carefully investing on items that are of neutral colors and modular so that Maya could rearrange things as she desires.

As a music producer himself, and seeing the innate music talent that Maya has displayed thus far, Bob also wants to set up a mini music studio station for Maya in her room. Even though they have a full music studio on the second floor of their home, Bob was the one who set up the lighting according to his own unique style and would like to give that stylistic freedom of lighting decoration to his daughter when she is older. He thinks this is important because as a music producer, he knows how much the lighting can impact his mood in the long run. Given Maya's age, Bob is looking more into digital light products to prevent any possibility of light bulb burns.

Their home is equipped with smart technology because Maya sometimes likes to go around the house without Bob's awareness. Many times, in the middle of a music production session, Bob could see through his phone screen that Maya is found asleep in a room with the lights turned on. He would then have to break his workflow and turn off the lights so that Maya could sleep better. But doing so, Bob breaks his production session and finds it harder to get back into the workflow.

**Bob's Goals:**

- **Modularity/Stylistic freedom:** Bob knows that as Maya grows, she might have different thoughts in the way her room is being set up and Bob wants to ensure that the products that are placed in Maya's room are modular enough to do so.

- **Quality always comes first:** As seen in their choice of living in Tribeca, Bob and his wife value a quality experience. As long as the product matches their requirements and is a quality product (in other words, it is safe, it is easy to use, and it lasts), they rarely find any trouble with paying for the price.

- **Smart technology:** As a tech-savvy family household (as seen in their smart technology equipped home, the SPIRIO | *r* technology in their piano, and the production studio), Bob values digital products a lot and would not mind setting up the technology for his daughter and teacher her either.

## Context Scenarios and Requirements

| How can we help Elizabeth? | Critical Requirements in Tandem |
|---|---|
|  <br>Most important:<br>- Ensure product requirements fit the eligibility of her customer base.<br>- The emphasis of our product remains in the domain of mental health.<br><br>If possible:<br>- Accommodate specificities in the product's development that should further accommodate interior design businesses. | - Mental health emphasis<br>- Target a savvy interior design audience<br>- Flexibility and accommodations to businesses<br>- Quality product with cost effectiveness<br>- Strive for intention, not randomness |

| How can we help Vanessa? | Critical Requirements in Tandem |
|---|---|
|  <br>Most important:<br>- Provide lights to academic environments that should boost proactive morale.<br>- Cost effectiveness of the product should be within range of a student's capabilities.<br><br>If possible:<br>- Utilize sustainable packaging for the student's chaotic life and work schedule.<br>- Provide durability within our product. | - Luminosity that will produce beneficial study habits<br>- Cost effectiveness for students<br>- Durability for long lasting support<br>- Mental health emphasis<br>- Built for residence |

| How can we help Bob? | Critical Requirements in Tandem |
| --- | --- |
|  <br>Most important:<br>- Prioritize charge capacity for our product.<br>- Include child safety features and modularity.<br><br>If possible:<br>- Quality and smartech is critical in the development of the product.<br>- Aim for easy variability and customization. | - Child safety<br>- Extensive charge capacities<br>- Smartech and ease of use<br>- Customization<br>- Remote access and control |

## Experience Attributes

Experience attributes for a product come from the overlap of corporate brand or stakeholder views and persona goals. Utilizing the information our team gathered from both the stakeholder meeting and the user persona goals, we identified four visually oriented adjectives that conveys the values of the digital dorm light. Each attribute aims to represent a unique quality of our product that makes the digital dorm light what it is.

### Accessible

Accessibility is a quality that addresses multiple important concerns related to the product. Firstly, it is important that the light is physically easy to access. A major concern in the focus group as well as in the individual interviews that our group conducted on campus was that the location of the central light switches was uncomfortably far from everything else in the room. Our goal when designing the digital dorm light is to focus on convenience

when it comes to turning the light on, such as using voice activation or remote control. Following that, the interface of the light must also be easily accessible. We want to create an interface that is simple enough so the user can easily access all of its functions without any complications or confusion.

### Personalized

The ability to customize and personalize a product is crucial as it allows each customer to use it according to their own needs. The marketing stakeholders described our brand's identity to be configured in a way that's very personalized. Therefore, our product will be available in different shapes and colors that customers can choose to suit their situation or desires. This quality allows people such as Vanessa Day to choose a cooler light to use in her workspace and avoid feeling depressed or unproductive.

**Durable**

The quality of the product largely depends on how durable it is or how long it can last without breaking. Elizabeth Wilson is someone who strives to start her business without suffering major costs, and a durable product ensures that she won't have to spend more money to repair a product that keeps breaking. People like Vanessa Day value durability because she still has at least two years of college left and needs a product that she can continue using throughout college and even after she has graduated. Others like Bob Clark prioritizes quality and will find no trouble paying a larger price for the product if it's guaranteed to last. Our group aims to create a product that is reliable and won't break easily over time.

**Modular**

Modularity in our product is important, as it allows a user to easily pack the product up and move it around. One of Vanessa Day's goals in a light product is hassle-free packaging and storage. Out-of-state students like her will find it important for a light product that can be easily packed up to put in a storage unit for the next semester. In addition to the product's practicality, the marketing stakeholders mentioned that modularity is our key advantage to differentiate the product from competitors because of the stylistic freedom of lighting decoration it allows. For example, Bob Clark looks for modularity in a light product because he can freely arrange the individual lights into his own unique patterns and give that same freedom to his daughter if she wants to rearrange the lights. Thus, the digital dorm light will be available as individual modules that are portable and can be put together to create larger patterns of light.

An important constraint our group must account for when designing the product is price. While we consider the experience attributes as we design the product, we must also allow for the product to be affordable enough so that most consumers can afford it. While there will be a set price for the key features of the digital dorm light, additional accessory features can be added as an option for a higher price.

## Colophon

**Lauren Allende**, Team Lead

- Individual Interview
- Executive Summary
- Product Overview + Project Parameters
- Personas (Vanessa Day)
- Colophon

**Joshua Choi**, Visual Designer

- Individual Interview
- Affinity Diagram
- Experience Attributes
- Colophon

**Carolina Lion He**, Interaction Designer (Generator)

- Individual Interview
- Personas (Bob Clark)
- Research and Summary of Findings

**Joshua Newton**, Interaction Designer (Synthesizer)

- Individual Interview
- Affinity Diagram
- Context Scenarios and Requirements

**Nadine Eldallal**, Industrial Designer

- Individual Interview
- Executive Summary
- Personas (Intro, Elizabeth Williams)