Grommet Theme Designer

M2: What do users need?

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Users

The **primary stakeholders** of the Grommet Theme Designer are designers who create themes for websites and applications. For the scope of this project, this user group will be further subdivided into designers who use the OS X operating system and the Sketch design tool. My initial survey indicated 60% of the primary stakeholders use OS X as their primary operating system as shown in Figure 1.
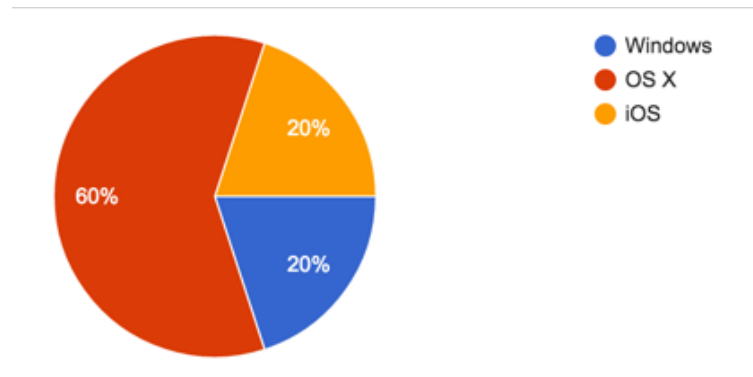

Figure 1. Primary operating system used by designers (n=5)

Primary stakeholders will generally have formal training in graphic design, web development, or related field. Those surveyed described their occupation as either "Software and web development" or "Arts, design, and user experience" as shown in Figure 2.
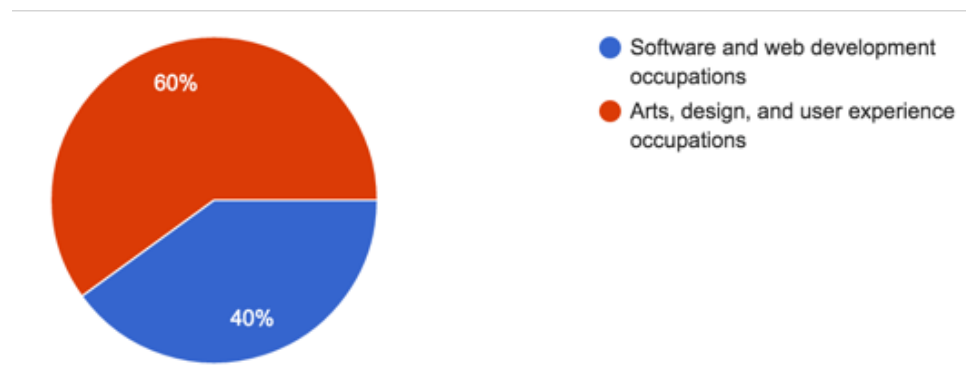

Figure 2. Occupations of designers (n=5)

The **secondary stakeholders** of this system are website and application developers who receive the theme output by the system.

There are two groups of **tertiary stakeholders** of this system who have no direct involvement with the project but will be affected by its outcome. The first are employers who have designers on staff who create custom themes as part of their job responsibilities. The second group of tertiary stakeholders is the users of websites and applications designed with the theme designer.

Primary stakeholders will be the focus of this project. The initial research, interviews, studies, and usability feedback sessions were conducted with primary stakeholders. Data was first collected using a Google Forms survey. Participants completed the survey at their convenience from February 1-4, 2016.

Research was also conducted using a series of 30 minute one-on-one interviews with primary stakeholders. Two of the interviews were conducted in person, and the third was conducted using Skype.

Tasks

Color palette selection, font selection, element styling, reviews, and developer handoff are the primary tasks for this project. Each of these tasks were discussed in detail during the interviews with members of the primary stakeholder population. From the interviews, the hierarchical task analysis in Figure 3 was created.
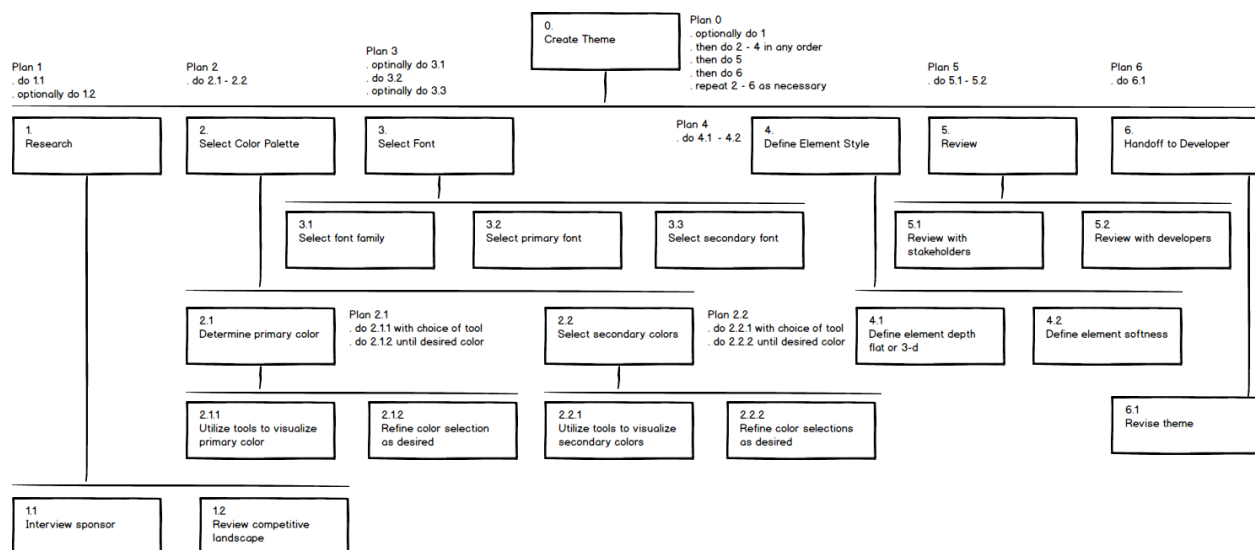

Figure 3. Hierarchical task analysis for designing a theme

1. Research

The research task is the foundation of the theme design process. This is where, "[We] had meetings about what the client wanted the user to feel and to build empathy for the user" (PS1, 2016). This is also the task where the competition is analyzed as PS2 described, "I looked up competitors of the product to make sure I didn't pick a competitor's colors" (PS2, 2016). This task is typically done in a combination of the client's office and the designer's studio. Designers interview their clients to understand their needs in a face-to-face meeting in most cases. Designers use the Internet to research the competition.

2. Select Color Palette

Color palette selection is a critical task in the theme design process. During interviews with primary stakeholders, this was viewed as a pivotal step in the process. In some cases, clients specify their primary color when they have an established brand. In other cases the designers

have a lot of freedom to select colors. Designers start this task using input from their research. Some clients request a "warmer" or "colder" color palette (PS1, 2016). Other clients request a specific vibe they want to portray, such as a "dark and edgy" (PS2, 2016). With their initial input, designers use tools such as Adobe Color or Paletteon.com to select and refine colors. Color palette selection is performed on a computer in the design studio.

3. Select Font

Font selection was also a key task in designing a theme. In some cases, clients and stakeholders have specific requirements that limit font selection. Some agencies standardize on a specific set of fonts that are available universally so they are assured to work properly in email campaigns (PS2, 2016). In other cases, more liberty is given to designers to select a font that aligns with the overall theme. PS3 described a situation where a client specified the font family, and the desire to use a free font (PS3, 2016). In some cases, a theme will use secondary fonts. Some designs employ a secondary font for headings to make them stand out (PS1, 2016). In other cases, a secondary font such as Comic Sans is used to overlay text on a chalkboard graphic for artistic flare, as PS2 described (PS2, 2016). Designers typically use tools such as Font Squirrel, Google Fonts or Adobe Typekit to select fonts. This task is generally performed in the design studio.

4. Define Element Styling

Element styling was the most unstructured and varied task based on my interviews. In fact, the trend I uncovered was element styling is often left largely to developers based on the development toolkit being used..

5. Review

The review task is done by sharing the theme with clients and developers for feedback. This task is frequently an iterative task when feedback is incorporated into the theme and reviewed until the client and development teams are satisfied.

6. Handoff to Developer

The final step in the theme design process is the handoff to developers. This task involves delivery of assets in the format used by designers. Figure 4 shows the tools most frequently used by designers.
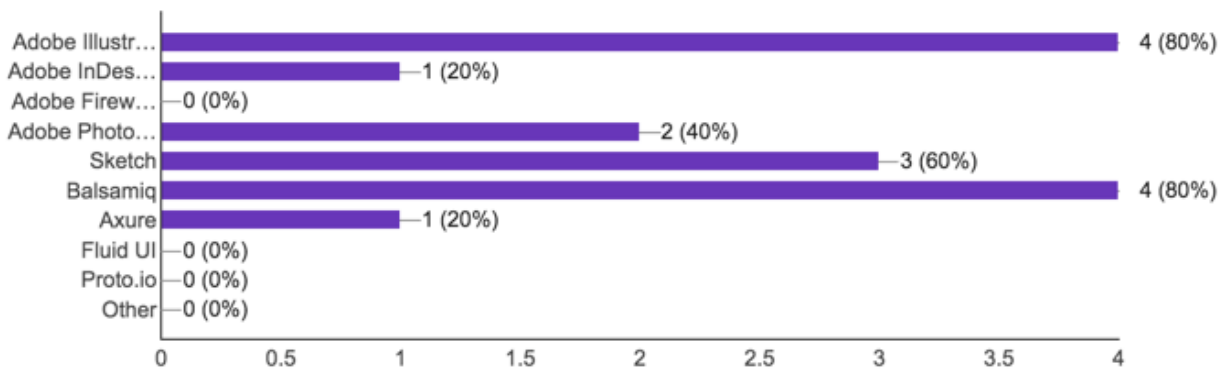
Figure 4. Most frequently used design tools, multiple responses allowed (n=5)

Analysis

Breakdowns

There were four key breakdowns I uncovered in my research. First, of the designers I interviewed, *none* of them had taken accessibility standards into account when designing themes. "I didn't start doing accessibility stuff until started working here [Hewlett Packard Enterprise]." Designing a theme that complies with accessibility standards such as the Web Content Accessibility Guidelines (WCAG) 2.0 requires extra diligence and it is unfortunately usually overlooked. This is a significant breakdown because according to Dix (2004), approximately 8% of males and 1% of females suffer from colorblindness (p. 18). These figures do not include users who make use of assistive technologies such as screen readers.

The second breakdown I uncovered was the lack of tooling and control for element styling. There is a strong tendency for designers to defer element styling to developers. PS2 described the, "major influence [on element styling] is from technology. In fact, 80-90% of element styling is driven by technology stack used by developers." PS1 described element styling as, "Chaotic and hap-hazard; we couldn't keep up with what dev was doing" (PS1, 2016). Despite the importance of element styling to support the overall theme and brand, it was surprising to uncover this breakdown.

Third, the significance of the review task emerged from my research. This task is critical because it enables collaboration and feedback from stakeholders and supports iterative design and refinement. I uncovered designers often spend significant time applying colors, fonts, and element designs in full pages so they can see their designs in context. However, the manual nature of this task limits the designer's ability to quickly explore variations of the theme.

Fourth, there is a breakdown in the handoff between the designer and developer. The handoff involves delivery of assets in a format familiar to designers such as Adobe Photoshop or Illustrator, or Sketch. However, this format is not directly usable by developers; it requires analysis and interpretation which is time consuming and lacks precision. Even using a platform such as Axure which provides interactive HTML prototypes requires interpretation by developers because HTML, CSS, and JavaScript in Axure is not designed to be used by

developers beyond the visual and interaction design.

Key Elements of Grommet Theme Designer

Designers who use the Grommet Theme Designer will be more productive with their ability to quickly create themes that are standards-compliant. The themes created will be usable by all users, even those with disabilities. The system will ensure adequate contrast in colors such that elements can be perceived by those with color blindness or low vision. In addition, special emphasis will be placed on the design and development of this project to ensure all primary stakeholders, including those with disabilities, have a productive and pleasant experience using the theme designer.

The Grommet Theme Designer will give designers a simple method for designing elements that support the brand and enable developers to easily utilize the elements.

To address the breakdown of efficient creation of alternatives, the Grommet Theme Designer will provide the ability for designers to explore a variety of colors, fonts, and element styles and instantly access interactive samples using their theme. Designers will be able to save multiple themes for reviews with sponsors, enhancing choice and collaboration with their clients.

The developer handoff will be addressed in my system by providing developers with assets that are directly usable in the Grommet developer platform.
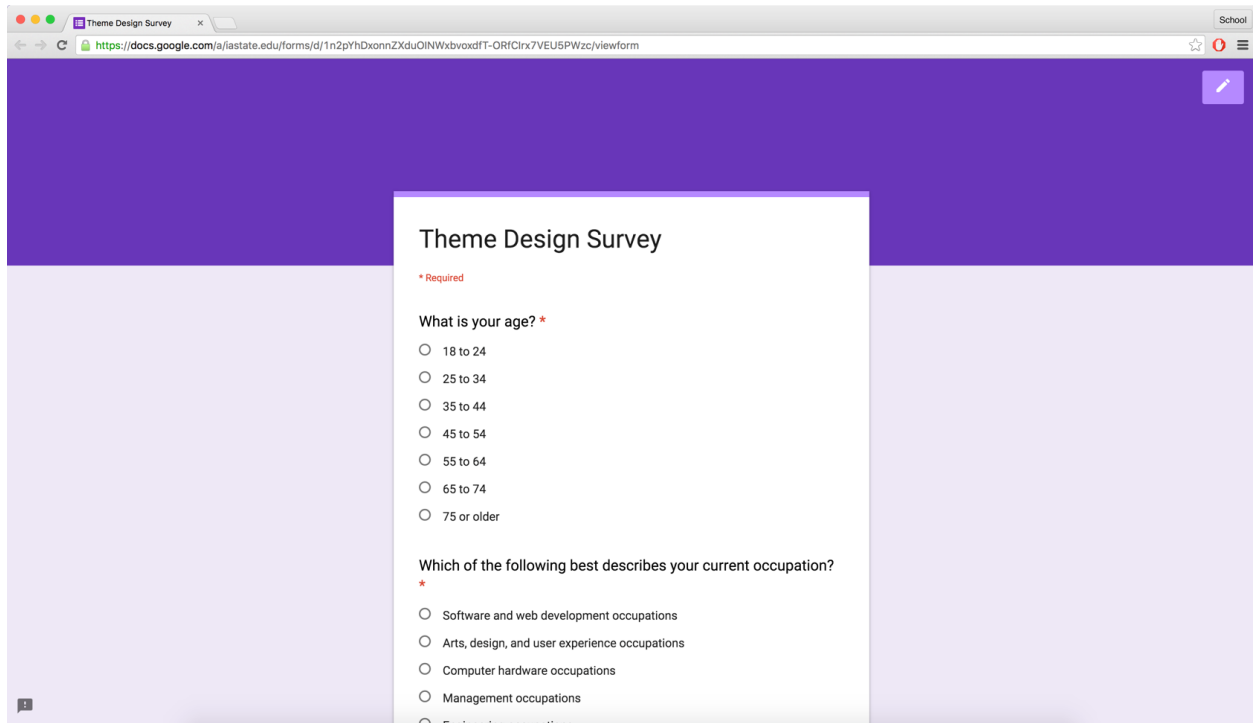
Constraints

My initial research has led to several constraints on the system. First, the system must allow designers to specify their primary color. Some clients have an established brand, and in those cases the primary color cannot be changed. Second, my system will allow designers to first select a font family and based on this constraint, the system will present fonts within that family. Finally, for the scope of this project my system will target designers who use the Sketch application. Eventually the system should be expanded to include support for other popular design applications as my survey results indicated other platforms are more frequently used.

Measures

I will use three measures to judge the success of my design. First, user satisfaction will be measured by a usability survey (Lund, 2001). Primary stakeholders were given a usability survey at the beginning of the project to rate their satisfaction with their most recent experience with theme design tools. Users of my system will complete the same survey and results will be compared. The second measure I will use is the projected time savings that designers expect my system will provide over their previous experiences. Third, the level of accessibility compliance with the created theme compared to previous themes they have created using the international standards as a benchmark (WCAG, 2008).

Appendix
Survey Screen

Survey Questions
Demographics
- What is your age?
- Which of the following best describes your current occupation?
- Have you ever designed an application or website?
- If you've designed an application or website, have you ever designed your own theme (fonts, colors, controls, etc) for an application or website?

About Your Environment
- Which of the following best describes your primary computer's operating system?
- What type of computer do you most frequently use for design?
- What tools do you most frequently use for design?

About Your Theme Design Process
- How many themes have you created for applications or websites?
- On average, how often do you create a theme for an application or website?
- When did you most recently create a theme for an application or website?
- The last time you created a theme for an application or website, how long did it take?
- Do you typically solicit feedback from peers, stakeholders, or clients when creating a theme?

- If you solicit feedback, how do you collect feedback?
- If you solicit feedback, do you use any tools to facilitate feedback collection?

About Your Theme Design Experiences
- Which of the following categories best describes your last experience designing a theme?
- During your most recent theme design experience, did you recall anything frustrating?
- Are there aspects of the theme design process that you wish were simpler or more automated?
- Are there aspects of the theme design process that you enjoyed or found satisfying?
- Have you ever used tools specifically designed to automate all or parts of the theme design process such as Paletton.com or BootSwatchr.com?
- What automation or assistive tool did you use during your theme design process?

About Your Design Tool Experiences (Lund, 2001)
- It is easy to use.
    - strongly disagree 1, 2, 3, 4, 5   strongly agree
- It is simple to use.
    - strongly disagree 1, 2, 3, 4, 5   strongly agree
- It is user friendly.
    - strongly disagree 1, 2, 3, 4, 5   strongly agree
- It requires the fewest steps possible to accomplish what I want to do with it.
    - strongly disagree 1, 2, 3, 4, 5   strongly agree
- Using it is effortless.
    - strongly disagree 1, 2, 3, 4, 5   strongly agree
- I don't notice any inconsistencies as I use it.
    - strongly disagree 1, 2, 3, 4, 5   strongly agree
- I can recover from mistakes quickly and easily.
    - strongly disagree 1, 2, 3, 4, 5   strongly agree
- I can use it successfully every time.
    - strongly disagree 1, 2, 3, 4, 5   strongly agree

Ethnographic Interview Questionnaire
A. Color Palette Selection
    a. Tell me about the last time you created a color palette.
    b. How did you pick the primary color?
    c. Did you use any tools to design the palette?
    d. What technique did you use to select supporting colors?

       e.   Did you ensure colors met any standards for contrast ratios?

       f.   Did you ensure colors were discernable by users with color blindness?

B. Font Selection

       a.   Tell me about the last time you selected a font for a custom theme.

       b.   How did you pick the font?

       c.   Did you use any tools to select the font?

       d.   What techniques do you use to define the typographic scale considering font weights and sizes?

       e.   Have you ever designed a theme with multiple fonts? If so, how did you select secondary font(s)?

C. Element Styling

       a.   Tell me about the last time you designed elements for a theme?

       b.   How did you decide on a general style, e.g. corner radius, flat vs depth, bold vs subtle?

       c.   Did you use any references or tools to assist with the element styling?

       d.   Did you process involve any iteration as you designed additional elements, such as buttons, input fields, checkboxes?

D. Developer Handoff

       a.   Tell me about the process you used to handoff your designs for development.

       b.   What format were the assets in?

       c.   How did you deliver the assets?

References

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Lund, A.M. (2001) *Measuring Usability with the USE Questionnaire*. STC Usability SIG Newsletter

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