

M I N I M A

Contemporary Approach to Business-to-Business Design Systems

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Abstract

Many business-to-business (B2B) design systems influence designers to use outdated patterns and designs with predefined layouts or elements. These patterns include the arrangement of interface elements like buttons and text fields and how they look visually, which leads to an unoptimized user experience (UX) and a less visually appealing user interface (UI). B2B interfaces are complex because they deal with much information. They have many functional elements that may not be necessary for the user to achieve their task. Most B2B interfaces look outdated as they do not use the current visual design language. The interface elements are inaccessible to the eye as they have heavy and reflective buttons, dark shadows, heavy edges, and sharp corners. This thesis study focuses on understanding designers' constraints while designing B2B interfaces using B2B UI design systems. It also aims to take steps toward solving it and enabling designers to make better products by being more creative in creating unique design solutions for distinct use cases. It will help users achieve product tasks faster, improving work completion efficiency. Alongside the complexities of B2B solutions, this study also explores the importance of minimalism in designing B2B experiences and interfaces. Various research methods, including co-design, surveys, and participatory user interviews, and my industry experience in B2B UX and UI design inform this study.

Glossary of Key Terms

Business-to-Business (B2B)	B2B is a domain where one business makes a commercial transaction with another.
User Experience (UX)	The user experience is how a user interacts with and experiences a product, system, or service. It includes a person's perceptions of utility, ease of use, and efficiency.
User Interface (UI)	User interface or visual design (VD) is how the interface of a product looks like visually. It includes elements like colours, hierarchy of elements, and visual consistency.
Minimalism	It is defined as the act of simplifying an experience and interface by removing any excess and unwanted elements and interactions.
Software-as-a-Service (SaaS)	It is a space where software is used as a service to run organizations. In this domain, most B2B UX and UI is designed.
Screen	A screen may mean the glanceable screen of a device or a singular viewport of a wireframe or an interface.
Information Architecture (IA)	IA consists of all the user flows including features accessible by the user.
User flow	How the user navigates through a product, software, website, or an application.
Delight	Delight is the satisfaction that a user feels when they can use a product with ease and success.
Elements	Elements can mean anything on the interface, like headings, tabs, forms, cards, search fields, and text fields.
Product	A product is a digital solution that solves a problem. It can be a software or an application.
Web Content Accessibility Guidelines	The Web Content Accessibility Guidelines (WCAG) are part of a series of web accessibility guidelines published by the Web Accessibility Initiative of the World Wide Web Consortium, the leading international standards organization for the Internet.

Skeuomorphism	Skeuomorphism is a term most often used in graphical user interface design to describe interface objects that mimic their real-world counterparts in how they appear and/or how the user can interact with them.
Wireframe	Wireframes are visual representations of a web page or app interface. They outline the structure and functionality of your product without getting caught up in colours, visuals, or specific content.
Software	Software is a set of instructions, data or programs used to operate computers and execute specific tasks.
Application	An application (App) is software that bundles together certain features in a way that is accessible to a user.
Design System	A UI design system keeps your product design organized and consistent. It has UI guidelines and consists of elements like buttons, layouts, and fields.
Interaction Design (IXD)	It is the design of the interaction between users and products. Most often when people talk about interaction design, the products tend to be software products like apps or websites.
Cognitive load	Mental effort required to process and learn new information.
Creativity	Creativity in this study's context is defined as the ability to make better UX and UI solutions that are unique.
Information	In this study, information refers to the data visible to the user.
Complexities	Complexities refer to the arrangement of information on the interface.
Disorganized	It refers to the lack of proper organization of information and functionalities on the interface.
Affordances	The ability of an object that helps user afford an action.

Admin User	These users have the most access to a product's functionalities.
Power User	They have considerable access to a product's functionalities.
Normal User	They have only specific access areas in a product.
Customer Relation Management	Customer Relation Management (CRM) software stores all customer data and helps improve customer relationships. CRM systems help users forecast sales, but most simply automate repetitive tasks like emails.
Enterprise Resource Planning	Large companies Enterprise Resource Planning (ERP) software to manage various business processes, accounting, risk management, compliance, and budgeting are among them.
Accounting Software	Managing financial operations and costs is simplified by accounting software.
Project Management Software	Project management SaaS solutions enhance cooperation and progress tracking in teams.
Content Management System (CMS)	These solutions allow businesses to start selling products and saving money on website development and UX/UI services.
Communication platforms	Many organizations widely use these SaaS products as their primary benefit as a communication platform is instant messaging and effective file sharing.
Human Resource Management	Human Resource Management (HRM) solutions have features like recruiting, interview scheduling, performance tracking and analysis, & employee reviews.
Payment gateways	These enable businesses to accept payments quickly and efficiently while handling hundreds of daily transactions.
Explicit Affordance	Explicit affordance gives cues using the physical appearance of an object.

Hidden Affordance	These affordances not revealed to the user until they take a specific action, such as hovering over an element on the screen.
Pattern Affordance	Pattern affordances rely on recognizable patterns.
Metaphorical Affordance	These affordances use real-life objects as metaphors for user actions
Negative Affordance	This affordance informs the user of inactive elements that are non-interactive
False Affordance	False affordances appear to afford an action but another action or no action
Functional minimalism	In an interface, functional minimalism denotes the reduction of functionality. Only the necessary core functionality remains in a functionally minimal design.
Structural minimalism	Structural minimalism refers to an access structure for an interface's functionality that is recognized to be minimal. In an ideal minimal system, suitable functionality lends immediate support.
Architectural minimalism	Architectural minimalism focuses on reducing the complexity of an interface by transparently distributing its functionality across minimal parts. The overall complexity is reduced without compromising the power of an architecturally minimal design in an ideal result.
Compositional minimalism	Compositional minimalism stresses the importance of the appropriation process for an interface. Paradoxically, compositionally minimal design must allow the user patterns to develop after the design activity is over.
Blue-Sky Approach	It means thinking out of the box or brainstorming without any practical constraints.

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Introduction

I am a professional User Experience (UX) and User Interface (UI) designer, and my work spans the domains of business-to-business (B2B) and business-to-consumer (B2C) SaaS (Software-as-a-Service) projects. While working on multiple projects from both B2B and B2C domains, I realized the striking differences between the two domains. According to my experience, B2C is a consumer-oriented domain where designers curate creative and unique solutions to satisfy the product's end-user, which has many benefits as it helps retain current users and acquires new users to use services like entertainment, leisure, music, and news offered by the product. However, B2B focuses more on business goals and is information-driven. Due to excess information and functionalities that help access or manipulate this information, it misses out on making the product easy to use for the end consumer.

As a designer, I never had the agency to make creative and unique design solutions. With B2B design, there are many guidelines that designers need to follow while creating the product. It often comes in the way of designing better solutions for users and helping them complete their tasks faster.

My research project will explore the B2B SaaS UX and UI design domain, understanding UX and UI designers' points of view on the domain and what can improve its current state of restrictions: lacking good user experience, hard-to-use and visually dated. I will also focus on coming up with provisional solutions. While my project will include some references to the B2C domain, it will not explore it as it differs from B2B and has different goals. I will focus its solutions on desktop, laptop, tablet, and mobile devices as they are the most used platforms for B2B SaaS products, dealing with UX and UI design of digital interfaces.

My research scope excludes the involvement of other stakeholders of design systems like developers, product, marketing, and business teams. I propose to use my research process to better understand what is required to create a designer-first UI design system that helps stakeholders design better solutions for B2B UI platforms.

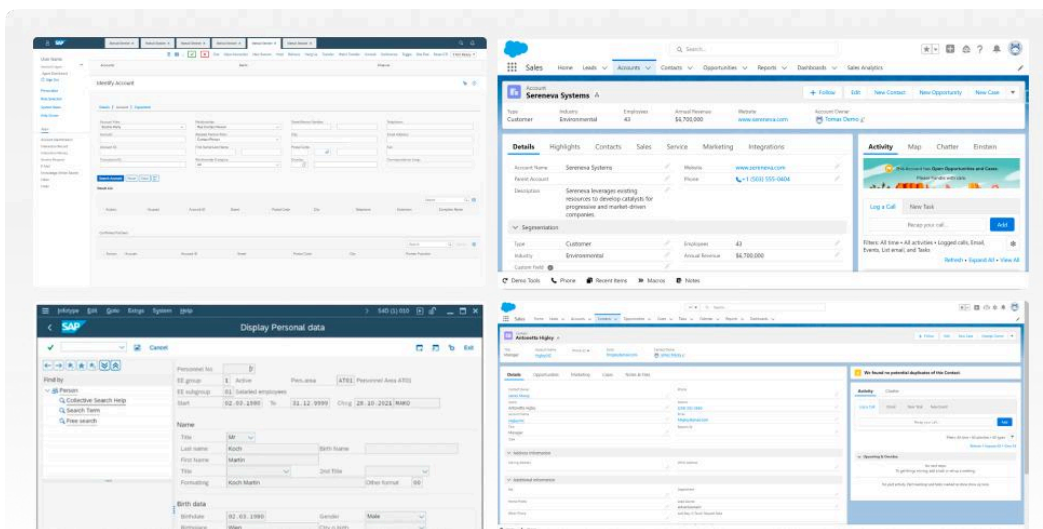


Figure 1. Current B2B application interfaces.

My thesis aims to research what industry professionals think about designing B2B interfaces using B2B design systems and aim to find a provisional solution. My study deepens our understanding of information-heavy, disorganized, cluttered, and visually outdated B2B UX and UI. As a designer, I aim to address these problems and find a possible solution(s) to mitigate these challenges.

Research and Methods

My research is led by asking, "How might we establish better UX and UI design practices for business software?". My sub-question is, "What are the problems designers face when using standard design libraries for B2B interfaces, and how can they make interfaces that are simple in structure, easy to use, and visually look better by challenging the current B2B design standard?". This research study drives on multiple methodologies. Auto-ethnography is the primary methodology that drives it.

SaaS B2B design is an exciting space to explore as it helps different organizations function properly by enabling the essential flow of complex information. This information can be about the company, customers, or its relations with other organizations. It may also be inter-company or intra-company information. B2B design solutions help access and manipulate such information. B2B interfaces are information-rich due to the complexity of tasks. These business-related tasks require excess data that users look at and make decisions. Designers follow specific guidelines while designing B2B solutions from B2B design systems. Due to many guidelines, there is a lack of creativity, and solutions become repetitive. It also leads to complex UI solutions that are hard to use. These interfaces also look visually dated since interface elements like buttons, fields, labels, and forms are not constantly updated visually in most B2B design systems.

Industry-Experience

As a professional UX/UI designer on B2B and B2C platforms, I realized this study has potential benefits in the B2B SaaS design industry. I have worked on various UX and UI design projects in the B2B domain and a handful of others in the B2C domain. In the B2B SaaS domain, I have worked on projects like web portals and web applications. I created information architectures, wireframes, and high-fidelity screen designs for various projects across multiple domains. These domains ranged across healthcare, organization management, online education, and customer relation management.

In some cases, I designed responsive applications; in others, the applications were intended only for a specific viewport. While making design decisions, as a team, we often made these portals information-rich due to how the design systems we utilized were structured. For instance, I designed an inventory management tool with many functionalities to address different use cases regarding a list. Users did not use most of these functionalities regularly, and being present on the interface always cluttered it. I worked with SAP Fiori Design Guidelines and Salesforce Lightning Design System, two industry-standard design systems. These design systems' guidelines help designers curate similar experiences and arrange interface elements. My experience with these design systems has been enjoyable as the interface design created using these B2B design systems has always been monotonous, cluttered, and less visually engaging. These experiences inform the study in various ways, making me aware of the design system constraints designers face while designing interfaces.

There are specific scenarios where a designer can customize how the interface elements look but have less control over how the interactions of these elements play out. These interactions may include what happens when users interact with the information they see on the interface. Such instances lead to more restrictions and less creativity in designing better UX and UI solutions. I would have designed more appropriate solutions if I had more agency over the guidelines to create interfaces.

While designing B2B software, it is crucial to consider different user modes like Admin, Power, and Normal users. Admin users have access to all product functionalities, power users have access to considerable functionalities, and normal users have access to only certain functionalities. Currently, the B2B software interface displays all functionalities to all types of users and whether they can access them. It increases cognitive load and leads to a cluttered experience.



Figure 2. The different user personas that operate B2B software.

Several commentators have argued that B2B designs often look outdated, with no significant updates to their elements. Brett Farmiloe of Techbullion asked, 'Why do B2B software look ugly?' to 12 industry leaders. B2B software is in continuous development and may present challenges to developers to make them more appealing without altering the underlying structure and user experience. At times, B2B software is not ugly. However, it looks more complicated and piled up with different tools that could confuse the user. Business and development teams sometimes prioritize functionality over aesthetics and user experience (Farmiloe, 2023).

It led me to research how we might establish better UX and UI design practices while designing business software. It felt like there was a need for a design system that disrupts current B2B UX and UI practices and helps designers make better solutions. This thought can potentially orient the B2B design industry toward something better for designers and users.

Surveys

Professional designers were the target audience for the survey. In this survey, participants provided fundamental insights using examples of various B2B design systems currently available, including Ant Design, Lightning Design System, SAP Fiori Guidelines, Carbon Design System, and Google Material Design. The responses were yes when asked whether they think the B2B design domain needs to be improved.

To investigate some contrasts between B2B and B2C design, I asked their views on B2C, and the response was that B2C design seems to consider more detail and the end-consumers needs. B2B looks to get the user's task done without thoughtful user experience. I deeply resonate with these points of view, as I have strongly felt the same in my years of design practice. B2B appears to focus on adding functionalities for various tasks for the user that let them consume and manipulate information, but it often turns out to be very cognitively heavy. When asked if B2B design should consider the same amount of design detail and consideration as B2C, the response was yes. Many respondents said that B2B design does not focus enough on the end-user. It has overwhelming functions, lacks visual appeal and flexibility, usability and experience, and many constraints. I strongly agree with these insights as I have faced this while curating B2B experiences. At times, when my team and I had great ideas, they were not achievable due to the constraints of B2B design systems. These constraints restrict the designer to make the interface a certain way. Survey participants described their experience with B2B design systems as monotonous, outdated, repetitive, confusing, time-consuming, frustrating, overwhelming, and dull.

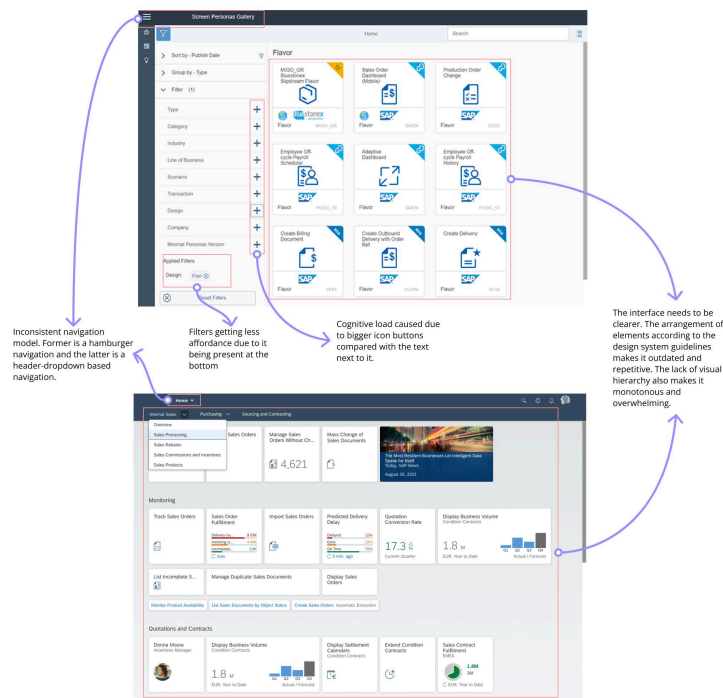


Figure 3. Cluttered and Incoherent B2B Interface

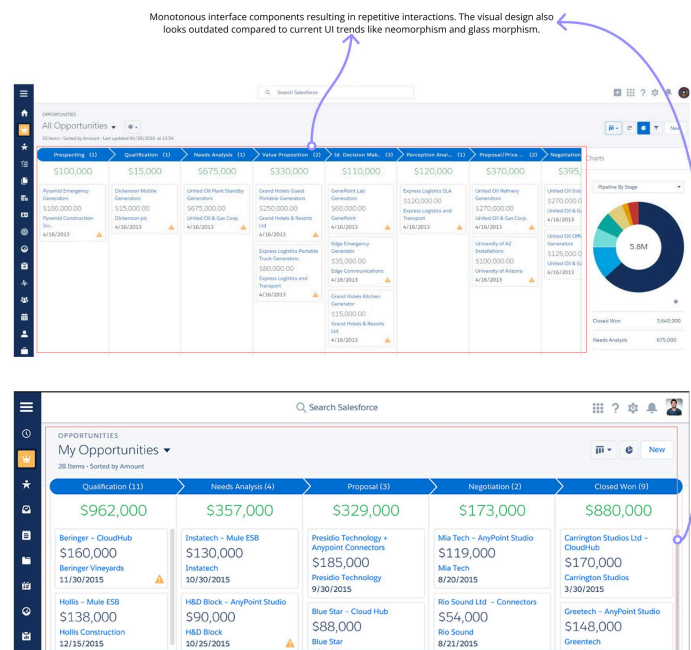


Figure 4. Monotonous B2B Interface with outdated visual design

Seeing many participants feel similarly about B2B design systems makes a strong point about the need for a change for the better. These challenges resonate with my frustrations in designing B2B interfaces using B2B design systems. The survey helped gauge whether this was the right track to follow. Results showed that almost all designers think B2B design systems are restrictive, complex, dated, and monotonous. It helped me place interview questions better with the participants and helped me get more insights.

First Person Interviews

First-person interviews are an essential part of this research. While conducting these studies, the study was deeply informed by how the participating designers thought about the B2B design systems. These interviews helped me empathize better with UX and UI designers. It also led me to envisage provisional solutions to specific problems. The interviews gave insights into the complexity of B2B designs and how design system guidelines lead designers to create complex solutions. Various participants often brought up the point of simplicity being a great addition to the B2B design. They also discuss the lack of visual appeal in B2B design systems. It is intriguing as I relate to so many of these insights. It helped me understand that most designers face similar challenges that lead to cluttered user experiences and interfaces.

Participant 1 talked about B2B design being restrictive due to business goal orientation. They mentioned that B2B platforms help businesses grow, but the end-user is the penultimate consumer.

I resonate with the thought of the end-user being the consumer and designing B2B solutions by empathizing with the end-users. They stated, "Every design system in B2B is very similar to each other". Reflecting on this statement, I see that my experiences of all B2B design systems are similarly monotonous. When asked to elaborate, they mentioned how every design system follows the same design pattern. For example, they used page layouts, where there are certain boundaries to bifurcate the secondary body content, e.g., list view, from the main body content, e.g., main details of an item, as shown in the instance below (Zoom Interview, November 22, 2023). Figure 5 is an instance of a predefined page layout from the SAP Fiori Design System.

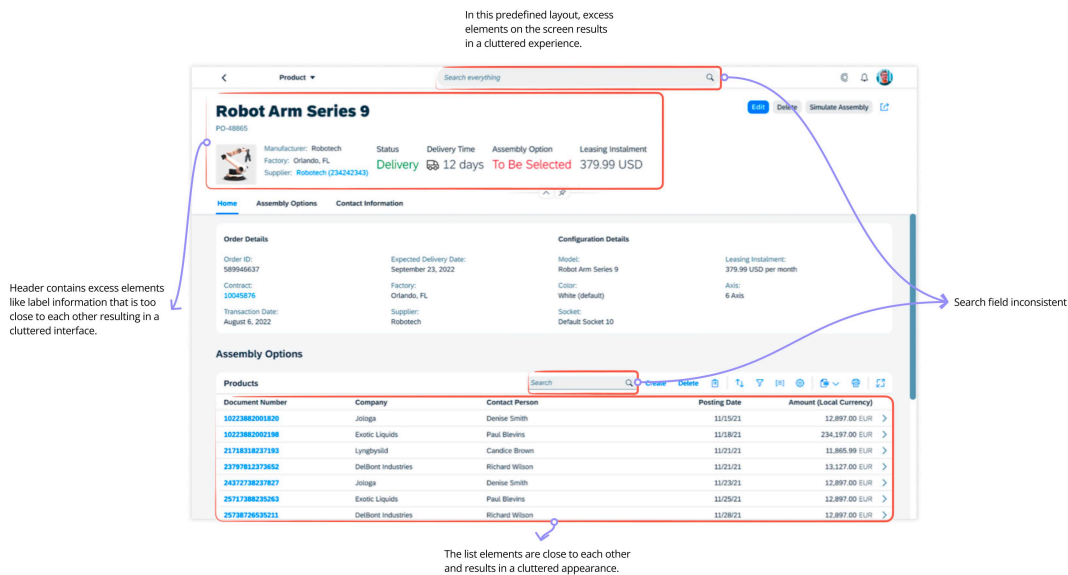


Figure 5. An example of a predefined layout

When asked about their thoughts on design system guidelines, they said that having rules and restrictions is not bad. If there is openness in the B2B design system, designers can be more creative despite having rules and regulations. They further added that if there are no rules and restrictions, it can lead to being a mess. In an activity later, they also said they would like the ratio of 80% agency to 20% guidelines (Participant 1, Zoom Interview, November 22, 2023). They also added that B2B design systems look monotonous, and many UI elements resemble most design systems. They further said it seems dull even if a designer combines elements creatively (Participant 1, Zoom Interview, November 22, 2023). It is a valuable insight as no matter how creatively a designer curates a design, it still appears dull. I relate to this, being a designer and a user of specific B2B portals. It is a valuable insight as it informs us of the importance of visual aesthetics in B2B design, where stakeholders involved overlook it.

Participant 6, while discussing their experience with B2B UX and UI design, stated that it is very challenging to use B2B UI design systems, especially for new designers in the industry.

They said new designers use a blue-sky approach, and B2B design systems are very restrictive. It causes frustration for the designer and makes them less efficient in solving different use cases (Zoom Interview, January 14, 2024). As a designer designing in the B2B SaaS domain, I have faced these frustrations. Problem analysis may provide great ways to tackle it with the appropriate solutions, but often, I find myself restricted by guidelines. It led me to create solutions which were less optimal for the user. Another participant discusses how B2B UI design systems are outdated. They also drew comparisons with B2C UI design systems where they said B2C UI keeps following the trend, whereas B2B UI is slow with that. They remarked that B2B design has scalability issues. They further described this by stating they could not add more elements in a predefined layout since they had to stick to the guidelines. They said they had faced many difficulties in designing B2B interfaces. They also remarked how clients often want to make the interface look new, but the design systems (B2B) they use do not have better aesthetics and visual appeal. When asked whether they find it hard to be creative while designing B2B interfaces, they responded, "Yes, I am quite a lot creatively constrained." The statement itself is strong since, as designers, we tend to take pride in being creative. Certain restrictions barricading creativity have led design teams around me to work with less motivation. They further described the constraints laid out in the rules of using layouts, buttons, and other elements, due to which they feel that they cannot add their design knowledge (Participant 4, Zoom Interview, January 12, 2024).

Participant 3 said they found designing in the B2B UI space challenging when they started as designers. They also stated that they find themselves creatively constrained while designing B2B interfaces and added that B2B design patterns contribute to a lack of creativity. They stated how creativity can be good for specific tasks, as certain things are missing in this (B2B) design space by giving instances like hover interactions and micro-interactions. Interestingly, when asked whether design solutions need to be unique for different use cases, they replied that predefined layouts work well enough but not the best. They further added that these layouts are limiting if the designers rely a lot on them, and they also come in the way of creativity (Participant 3, January 7, 2024).

Interestingly, another participant said they do not feel creatively constrained using B2B UI design systems. They added that designers should know their design system well and that designing it with designers in mind will lead to fewer limitations (Participant 5, Zoom Interview, January 13, 2024). The contrast of thoughts is interesting amongst designers as all these insights highlight that thoughtfully making design systems with designers in mind will lead to fewer creative constraints.

Participant 1 discusses that minimalism is a core part of how we see products today. It gives more freedom to improve designs and can improve B2B design systems. Incorporating minimalism into it can make it easy to design products (Zoom Interview, November 22, 2023). Being a minimalist, I understand the importance of minimalism and simplicity in an interface. I believe there is beauty in simplicity. I resonate with the thought that it should be a core value and a testament to the study. Another participating designer, when asked about minimalism, said that necessary things should be upfront, and things that are not necessary should not be there. Prioritize a component's essential tasks and hide low-priority tasks within something. It can ensure complex functionalities, and minimalism can stay a significant principle. (Participant 2, Zoom Interview, December 21, 2023). Another participant discusses that building a minimal B2B design system may be difficult as there will always be much information to show.

However, if one functions on principles of minimalism, brings out good visuals, and keeps the core UX of B2B, it will be suitable for users to utilize software daily and help designers curate better interfaces (Participant 3, Zoom Interview, January 7, 2024). As these insights suggest, applying minimalism in designing B2B SaaS interfaces may help designers curate better experiences and interfaces.

Visual design aesthetics was a common topic amongst all participants in this study. Most participants advocated for better visual aesthetics in B2B UI design. Participants often complained about the monotonous nature of B2B UI design system elements. Participant 1 said in a conversation that everything looked bland and dull. They further added that B2B design systems do not allow for gradients. Colours are essential for improving the UI (Zoom Interview, November 22, 2023). Participant 4 added interesting insights advocating for visual aesthetics. They talked about how B2B lacks colours and font styles. They also showed how, in B2B, there is a restriction on thoughts due to which UI trends like glass-morphism and neomorphism are not incorporated (Zoom Interview, January 12, 2024). Typography and colour are essential (Participant 5, Zoom Interview, January 13, 2024). Participant 6 appreciated glass morphism, and they also mentioned neomorphism. However, they said they prefer a flat style of design. They believe adding extra visual elements might be unnecessary (Zoom Interview, January 14, 2024).

Participatory Research

Participatory activities inform the study in various ways as they touch upon multiple viewpoints of UX and UI designers. In this phase, designers answer specific design questions, and these answers create summarised data patterns. These insights revolved around culture, minimalism, B2B, creativity, and innovation while anchoring UX and UI design as central pieces. Giorgia Lupi's project at TED, Data Portraits, inspires this activity.

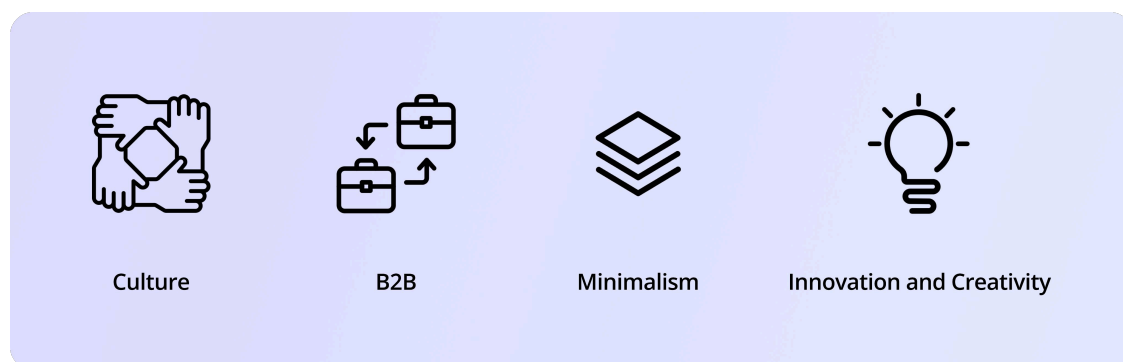


Figure 6. Visualization representation of what designers think of culture

Culture

Most designers are inspired by culture in some instances when they design. Many believe culture can influence UI design systems. Participant 4, contrary to others, thinks culture and UI design systems are very different. It is an exciting insight as it sheds light on how different designers place culture and design. I feel designers create solutions for users and must understand what culture surrounds their end-users. It informs their design decisions better and helps them curate better interface experiences.

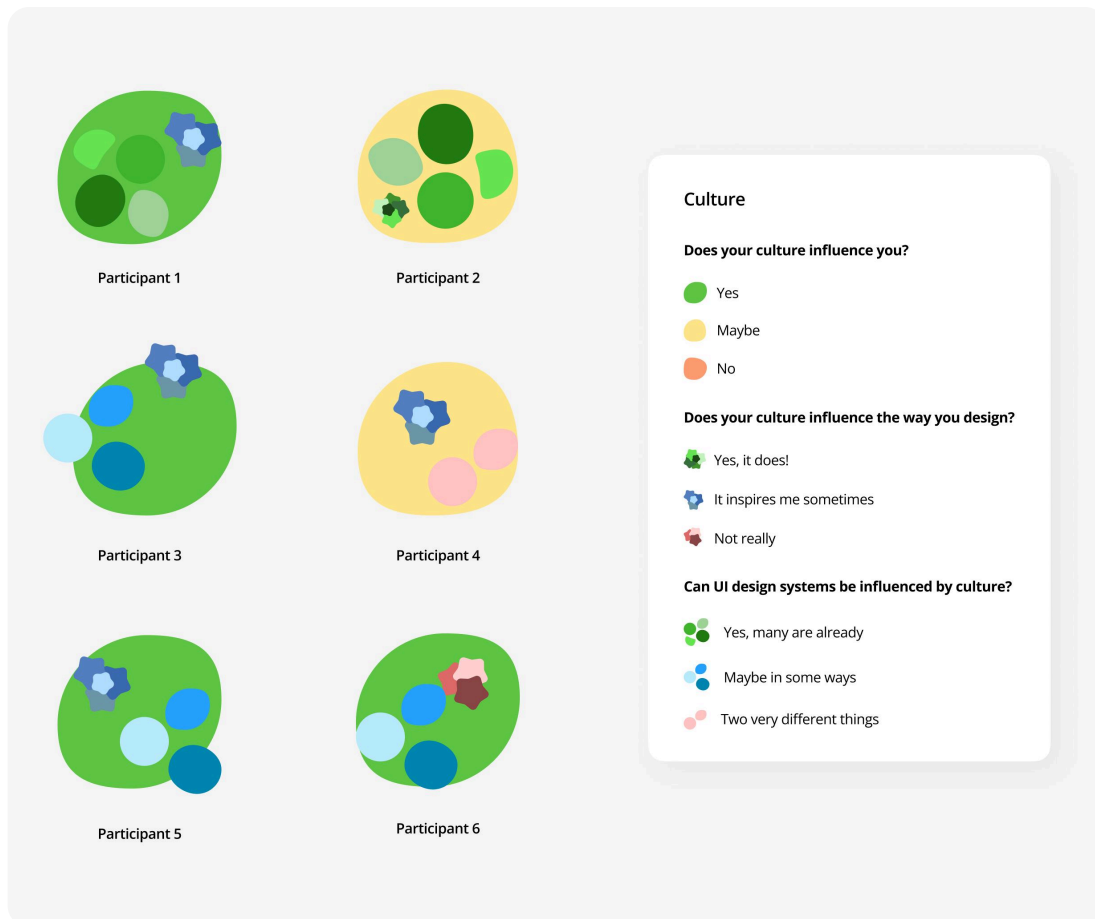


Figure 7. Visualization representation of what designers think of culture

B2B

Most participating designers feel that the B2B design is an exciting space. They also think B2B design systems are restrictive. This insight gave me a sense of understanding and empathy as I have faced many design system restrictions while designing B2B interfaces. Most participants would like to have control over designing B2B UX and UI. Visual design is said to be important in B2B design. The fascinating insight is that most designers find it hard to be creative while designing B2B interfaces due to design systems. It opens an exciting dialogue since, according to interviews, most participants feel similar about B2B design but still find it an exciting space. It extends the scope for exploration and improvement.

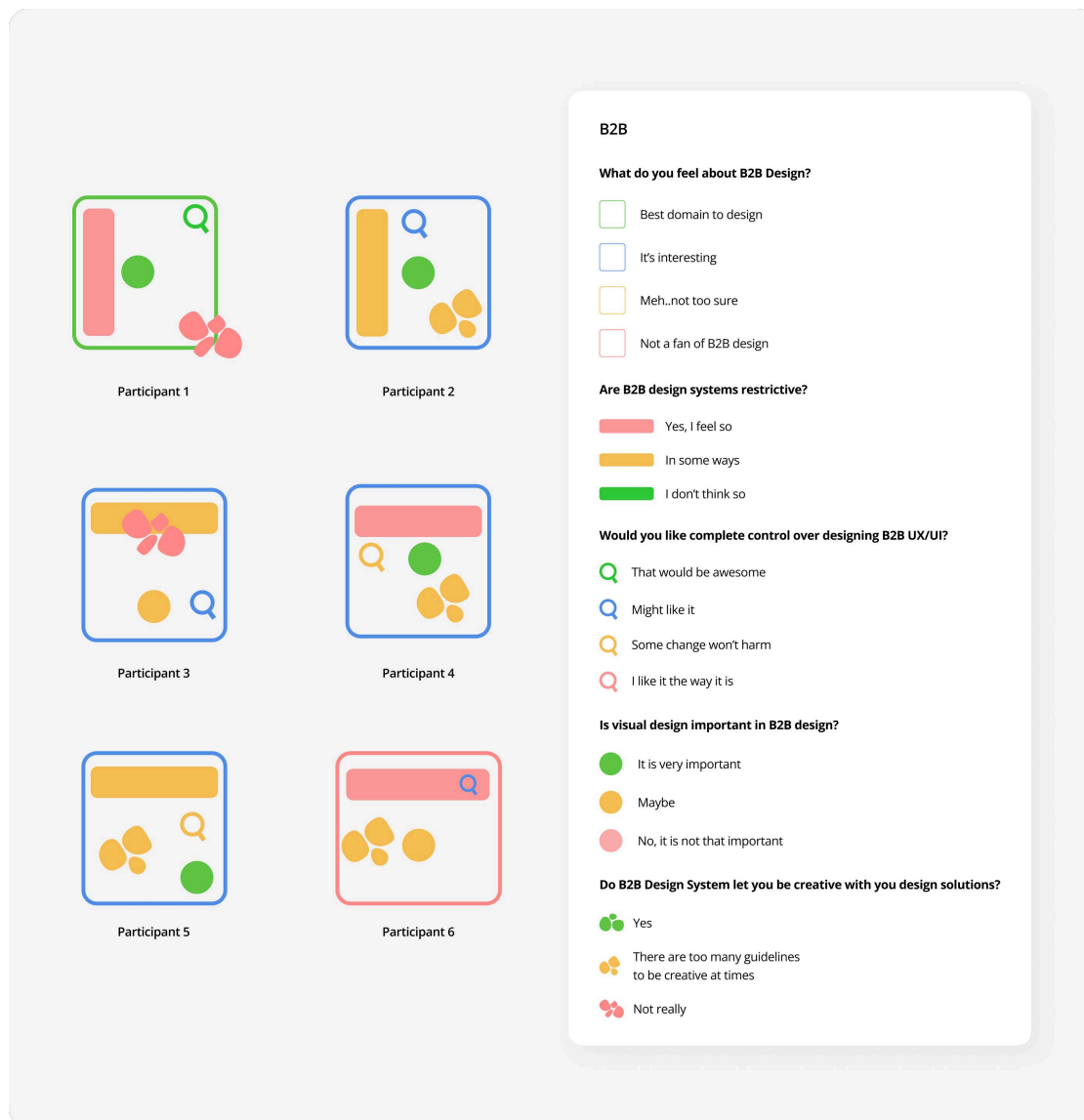


Figure 8. Visualization representation of what designers think of B2B

Minimalism

Minimalism is an exciting space, and since B2B designs deal with complex interfaces, it is essential to determine how minimalism might play a role in exploring this space. Most participants find minimalism somewhat important, and a couple of participants consider minimalism to be essential. Most participants considered simplicity in UX and UI design essential, whereas some felt it was not as crucial. Most believe minimalism and cleaner UI in B2B design can be impactful. Most of the participating designers felt that B2B UX / UI is more cluttered than it should be, and most designers cannot declutter the interface even though they think they should simplify the design. It highlights minimalism as an essential aspect of inclusion in the B2B UX and UI design space.

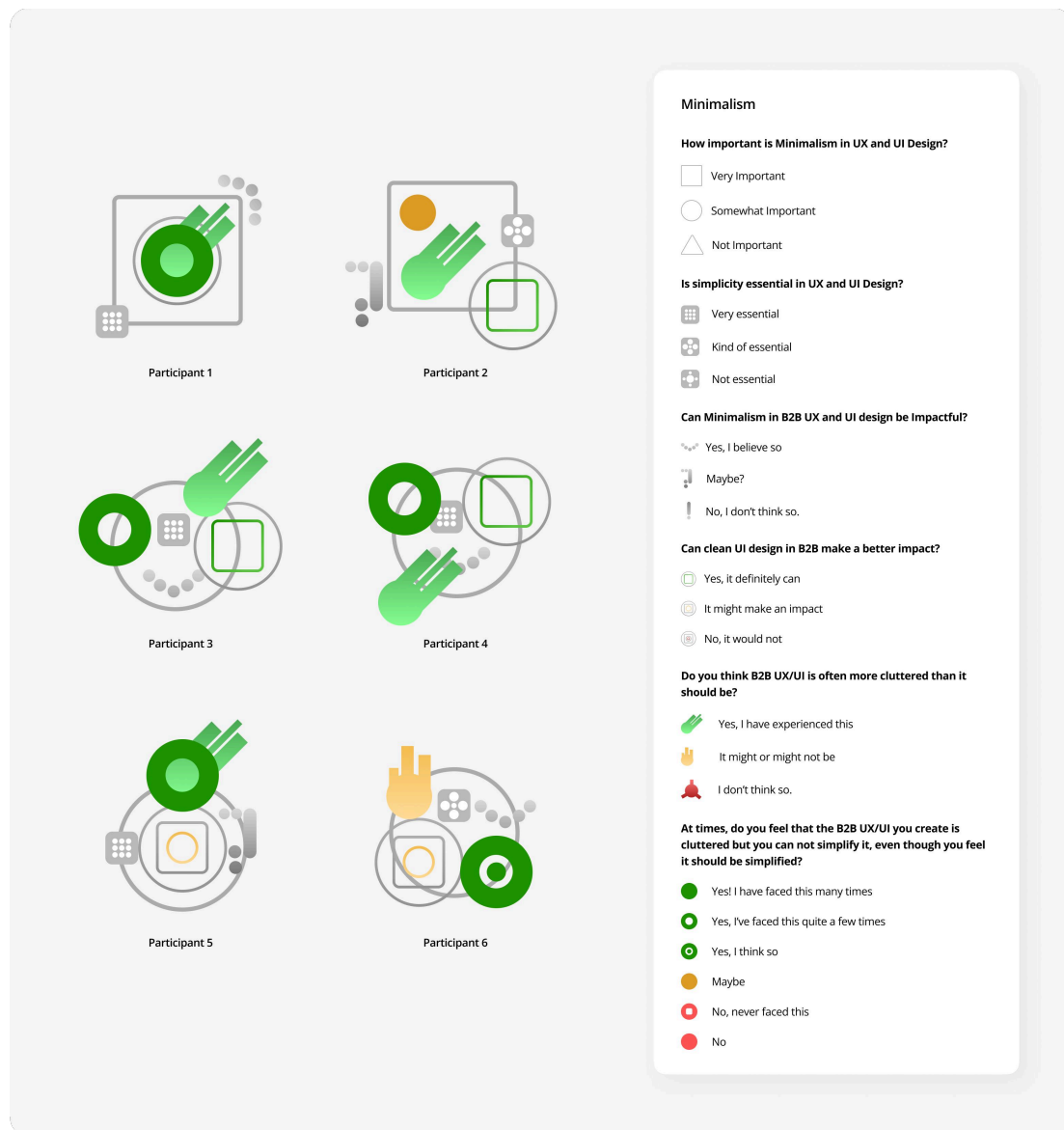


Figure 9. Visualization represents what designers think of minimalism

Innovation and Creativity

This segment helps determine what invokes creativity and innovation while designing B2B products. Most designers considered UX and Graphical User Interface (GUI) together. Most participants found guidelines helpful in design, although most participants believed guidelines sometimes restrict creativity. Many participating designers felt that the shape of the UI elements, like buttons and text fields, influenced their design. It provides an exciting insight into the importance of aesthetics in UI design.

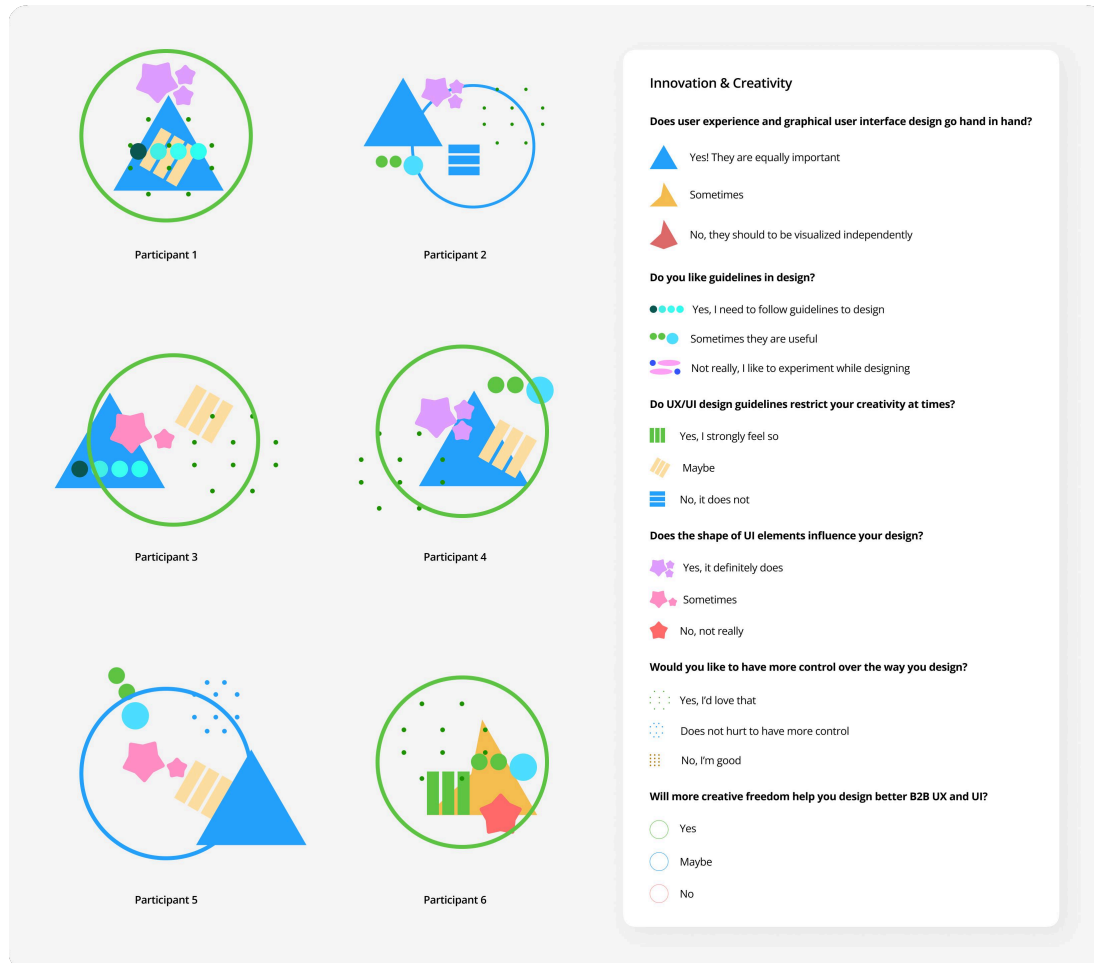


Figure 10. Visualization is a representation of what designers think of innovation & creativity

Mood-board

The mood-boarding activity gave insights into how designers perceive the world around them, what they find natural, and how it influences their designs. In this activity, participants had to answer direct and indirect questions about design in the form of an image. I think this activity was significant in bringing this research together as it was engaging and let the participants interact more with their thoughts.

Figure 13 shows that most participating designers prefer a circle as their favourite shape. There are exciting reflections on why they chose a circle over other shapes, like it never ends and is balanced, smooth, and versatile. Some also find hexagons as their favourite shape, resembling a circle from far away. These insights inform how designers might look at UI components while designing and bring an opportunity to ingrain the values of these shapes.

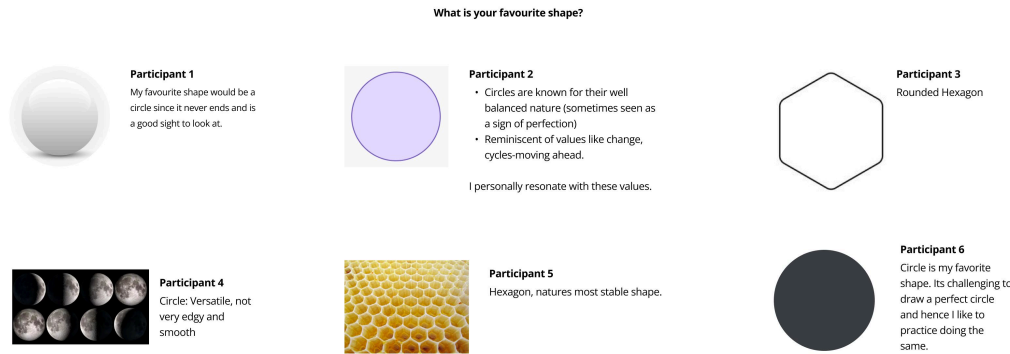


Figure 13. Participating designers on their favourite shapes

Figure 14 tells us how the participating designers feel about the current state of B2B. These responses are curated from different lenses but convey the same context of lack of improvement.



Figure 14. Participating designers on why B2B has stayed the same

Participants had similar insights when asked about functionality, as shown in Figure 15. Functionality, by these designers, is described as a logical stepwise process. It is also said to be something valuable and usable for a purpose.

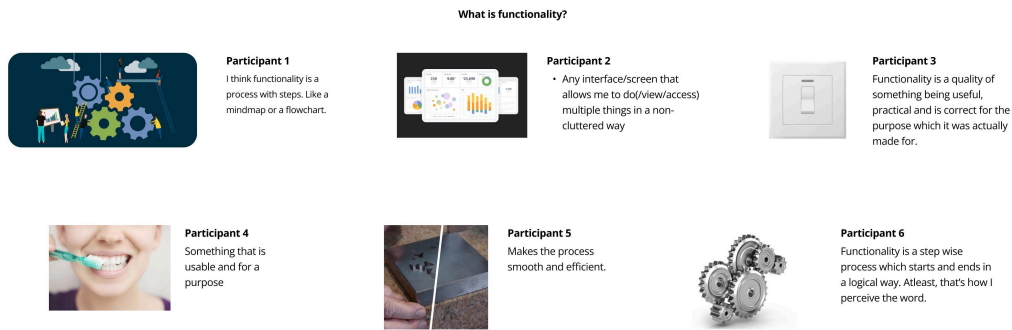


Figure 15. Participating designers on what is functionality

Prototyping

While this study is explorative, it also aims to solve the challenges designers face while designing B2B SaaS products. From all the insights gathered, a way to enable designers to curate a good user experience and make an up-to-date and visually pleasing interface in B2B SaaS products was essential. In this study, I prototyped a design system structure that includes an Information Architecture (IA) creator and a UI design library with specific practices that give designers more agency over how freely they curate an experience and design an interface. I think it was central to the idea of creativity, based on my experience and research insights, to let designers create solutions that they feel are appropriate for particular use cases instead of always following what the design systems have laid out. The design system prototype also has predefined layouts like other B2B design systems. It also is a disruption since it allows the designers not to use them and create something they find appropriate.

Industry Standards & Expectations

"[User experience] is used by people to say, 'I'm a user experience designer; I design websites,' or 'I design apps.' they think the experience is that simple device, the website, or the app, or who knows what. No! It's everything — the way you experience the world, the way you experience your life, the way you experience the service. Or, yeah, an app or a computer system. But it's a system that's everything."

~ Don Norman, 2016

I hold this philosophy very close to me as a designer. Looking at everything when accounting for experience is essential since it makes one more empathetic. Once a designer is empathetic, they design for others as what they would design for themselves. The term 'User Experience' has diverged into multiple meanings in hardware and software design over time.

Today, this term is most prevalent in designing web and mobile applications. A few other design domains very close to UX design are UI design, Interaction Design (IxD), and Visual Design (VD) (Interaction Design Foundation, 2016, Designing User Interfaces for Users section). I have actively designed digital user experiences and interfaces for B2B and B2C domains within these domains. In my opinion, interface design is a subset of experience design since it contributes to the experience of pleasing interfaces that help users achieve their tasks quickly. Its ideology is not just an experience of the digital screen but everything.

I have always strived to design unique solutions as every problem is different, and so should the solution be different. An instance of a problem is how the user may interact with a wizard. While there are design solutions to address this by having steppers, there is a disconnect in the context of the process. Once the user finishes filling in the details on a certain stepper, they move to the next one. It changes the context entirely, and going back is going back to the previous screen. The affordance of flexibility in completing the wizard reduces due to the significant cognitive shift. While designing a similar solution, I looked for a more intuitive approach.

In this use case, the user had to use the wizard to complete an order. I thought about what feels more natural: constant daily redirections are a part of our lives, and so should the check-out flow aim to achieve. Constant redirections occur for us every day. For example, if we forget our car keys, we will check places where we might have left them irregularly. We do not walk at a particular speed and angle to the place of investigation. An interface must be designed the way we think and move. Our mind and body are constantly in a state of dynamic change. It makes us fluid, and so should the interface we interact with. The interface must reflect the ability to constantly redirect as its user would in the physical world. The thought is to create an interface that feels like an extension of the user (Apple, 2018). So, instead of abrupt disconnect, I imbibed constant redirections in the UI, which added to the interface experience. In the solution I designed, the user can access any wizard step conveniently without losing the context of other steppers involved. Once the user clicks on a particular stepper, it expands, and the open stepper collapses in its place. After completing the stepper successfully, the title of that stepper turns green to indicate it has been filled or red to indicate it needs review. It adds fluidity to the user's movement on the interface.

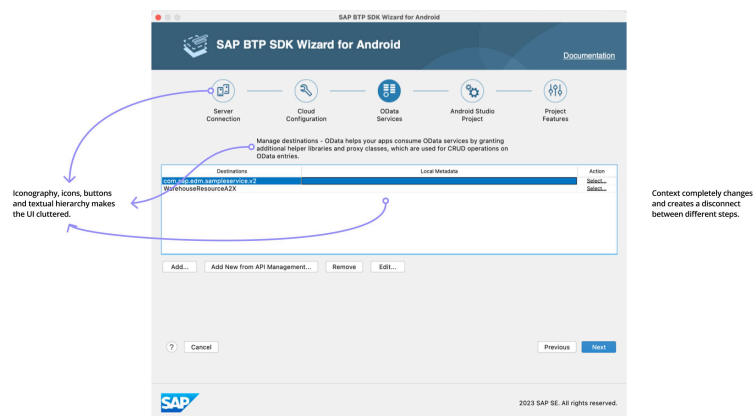


Figure 16. An instance of how most B2B wizards function

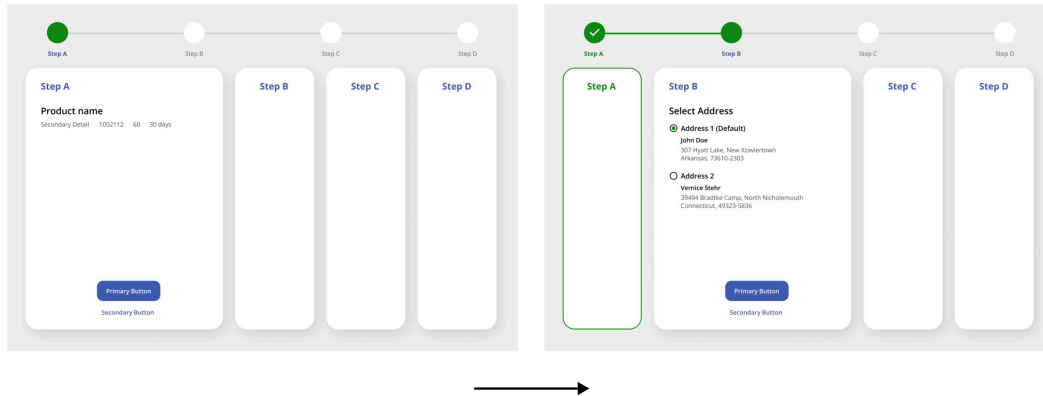


Figure 17. My design of the wizard is to make the process more engaging and intuitive for the user.

UI or Graphical User Interface (GUI) design closely relates to the experience's design process. It is the process that designers use to build interfaces. These interfaces can be software-based or hardware-based. UI design primarily focuses on the way a user interfaces with the product. Simultaneously, it also relates to the aesthetics of the product. In my experience, it is essential to design interfaces that look visually aesthetic as they are easy on the eye and help the user operate the interface. UI design plays a crucial role in capturing and retaining user attention. An interface with visually appealing elements, intuitive navigation, and practical information architecture creates a positive first impression and encourages users to use the interface (Mouatamid, 2023).

Business-to-Business (B2B)

In the B2B UX & UI domain, designers design applications/software for professionals. The thought of achieving organizational goals curates these products. Governments, schools, and organizations often use such software. These software and applications are full of information and functionalities. For example, retail employees use Point of Sale (POS) software to keep track of daily transactions, customer information, and more regarding the business. Designers often refer to B2B Design Systems when designing such products. It helps them follow specific guidelines and frame UI elements to incorporate into their design. Some examples of such design systems are SAP Fiori Design Guidelines, Lightning Design System by Salesforce, and Atlassian Design System.

Software-as-a-Service (SaaS)

SaaS products are essential in running B2B models and deserve care and thoughtful design curation. The market for these products is enormous, and all the thriving companies use some kind of SaaS product. Designing the UX and UI of these types of software is vital.

Software as a service (or SaaS) is a way of delivering applications over the Internet—as a service. Instead of installing and maintaining software, one simply accesses it online, freeing oneself from complex software and hardware management. SaaS applications are sometimes called Web-based, on-demand, or hosted software.

Whatever the name, SaaS applications run on a SaaS provider's servers. The provider manages access to the application, including security, availability, and performance (Salesforce, n.d.).

Types of B2B SaaS applications

There are many types of SaaS software: Customer Relationship Management (CRM) software, Enterprise Resource Planning (ERP), Accounting Software, Project Management Software, Content Management System (CMS), Communication platforms, Human Resource Management (HRM) solutions, and Payment Gateways and Billing solutions (Types of SAAS software: Everything you need to know about saas categories, n.d.). I have designed ERPs and accounting software as a UX and UI designer. Most of the time, due to the design system guidelines and excess information lacking hierarchy, I could not design something appropriate and distinct. I audited CRM software as well, where I performed UX reviews. In my findings, I found that most platforms did not meet common UX laws that make the product easy to use.

Design Systems

A design system is a collection of UI components, patterns, and guidelines that enable designers to create user experiences and interfaces. Designers can define UI elements like buttons, text, and other elements they will use throughout the design. Design systems are helpful as they bring about consistency. They represent colours, spacing, and other elements to make the workflow smoother and faster. ("Design Systems," n.d.). Design systems also keep visual design and language consistent and provide a secure source of truth for multiple teams like product teams, developers, and designers. Design systems are also known as companies' design language or design philosophy (Naseva, 2024).

Brad Frost describes design systems containing design language style guides in the book Atomic Design. The book states that design language style guides articulate a general design direction, philosophy, and approach to specific projects or products. These style guides incorporate aspects of other style guide categories to make high-level concepts more tangible. These guidelines are not permanent and will likely change with time (Frost, 2016). Design system makers are the ones who create, maintain, and govern the system. They need to work closely to ensure that the system is intelligent, flexible, scalable, and addresses the needs of the users and business (Frost, 2016). In my experience, B2B design systems enable designers to create experiences and interfaces that help users in the B2B domain achieve their tasks. However, the B2B design system guidelines instruct the designer to make a screen that prevents users from operating the interface efficiently.

Designers follow the predefined guidelines of design systems, whether they are accustomed to them or not (Participant 3, Zoom Interview, January 7, 2024). I resonate strongly with the thought of designers adhering to instructive design guidelines. In my experience, it takes away the creativity of solving interface problems with solutions that solve the cause instead of the symptom. Participant 3 also stated that most B2B design systems lack the functionality to be creative due to the predefined set of rules. Due to this, designers cannot modify designs to their liking. It also lacks colour, although it might be slightly easy to use as it has a base set of guidelines that helps new designers in the field. (Zoom Interview, January 7, 2024). Some examples include SAP Fiori Design Guidelines, Salesforce Lightning Design System, IBM's Carbon Design System, and Atlassian Design System.

Whatever the name, SaaS applications run on a SaaS provider's servers. The provider manages access to the application, including security, availability, and performance (Salesforce, n.d.).

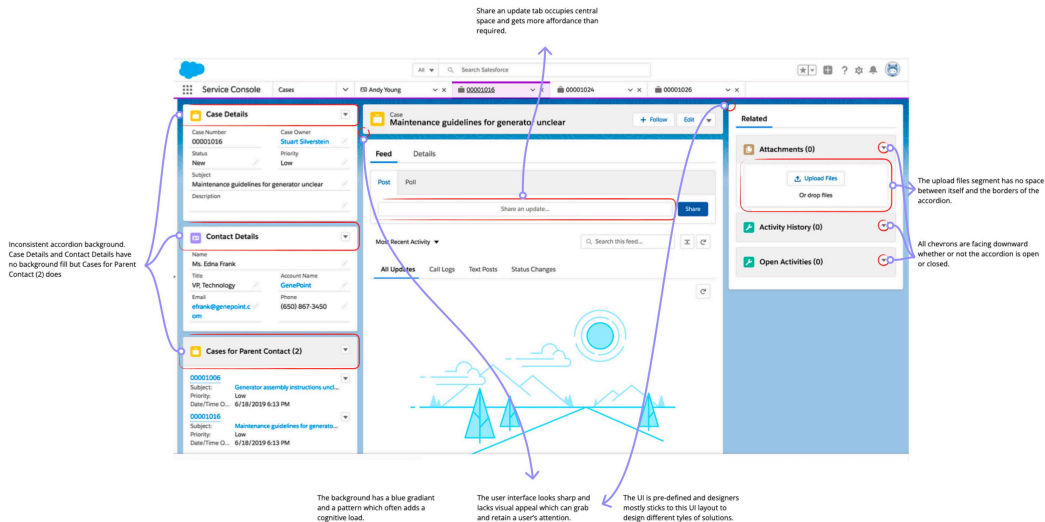


Figure 18. An example of how a B2B design system resulting in a cluttered and inconsistent interface

Problem areas

Various commentators say B2B interfaces are cluttered with information and functions, complicated to use, and visually less appealing. It adds to the number of variables when designing them with unique solutions. However, I feel there are more reasons for the current state of B2B UX and UI. Some B2B software may appear dated in that some of the most ubiquitous pieces of software were built in the late 90s or early 2000s when web app design was in its infancy and browser technology did not allow for rich experiences (Horodezky, 2018). Another reason why B2B UX design is terrible is because the buyer is not the end user.

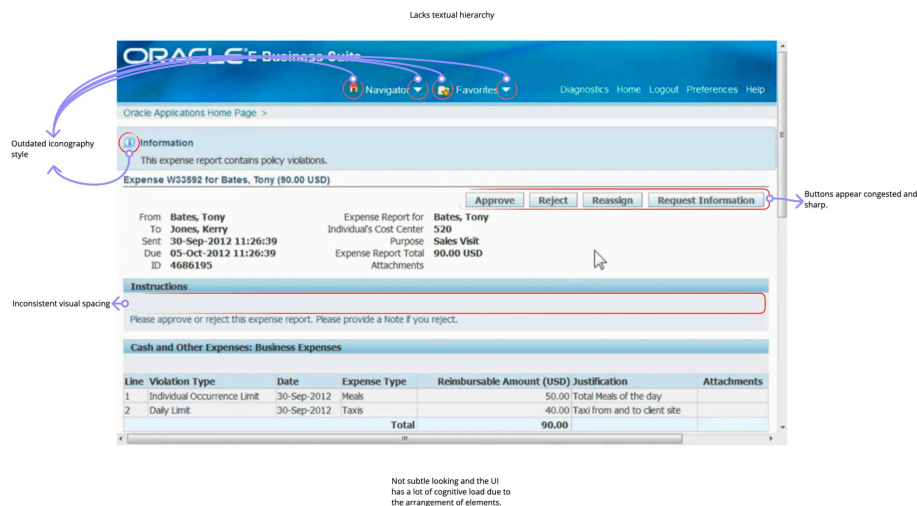


Figure 19. An example of a cluttered B2B interface looking dated

Creativity and Innovation

Many commentators believe B2B application/software product designs are cognitively heavy and information-rich. While the professional user needs access to all the functionalities and information, it can often lead to an exhausting user experience due to the cluttered nature of the UI. The distractions can further impact the interface experience. This abundance of information and functionalities on the interface in almost every step of using a B2B product comes at the cost of tarnishing the user experience. According to Don Norman, the best interface disappears when we are using it:

"The real problem with the interface is that it is an interface. Interfaces get in the way. I don't want to focus my energies on an interface. I want to focus on the job".

~Norman, 1990.

This dissonance can be rooted when the designer makes a B2B interface using B2B design systems. Most B2B design systems have specific guidelines that often restrict designers from exploring beyond what the design system suggests as a solution. It can conflict with creativity, which leads to monotonous design solutions. Some B2B design systems have predefined page layouts in which a designer needs to put their solution. For example, SAP Fiori Stencils provides page layouts for different use cases, which might be helpful in some instances but counterproductive in others as it does not let the designer explore the possibility of a better solution proposition (Participant 3, Zoom Interview, January 7, 2024). The UI elements in B2B design systems can be essential as they help designers quickly build interfaces. These UI libraries already have most UI elements like buttons, typeface, colour palettes, text fields, and more. However, most of these interface elements do not meet the current UI design standard of aesthetics and often come off as cluttered and less delightful. It can make the product look dated and less likable by users (Participant 6, Zoom Interview, January 14, 2024).

Complex Design Solutions

According to interviews, designers often design complex B2B interface solutions for the end-users due to the guidelines of most B2B design systems they use. The guidelines often restrict them and have many information and application functionalities to include in the user flows. It, at times, is aggravated by the dated visual look of the UI elements these UI libraries must provide. When these catalysts come together while designing the user experience of a product, it often hinders and leads to complex solutions that are harder to use (Participant 4, Zoom Interview, January 12, 2024).

Visual Design

The visual design of an interface is essential in defining the success of the application/software. Consumer technology surrounds users today, and they use B2C applications daily. Users are used to achieving the user goal swiftly, without distractions while using applications. While the process of designing the user experience of an application plays an integral part in reducing pain points, how the user interface of an application looks plays an equally important role. The visual design of an application determines how pleasing and delightful an application looks and how tempting it might be for the user to use it.

In the B2B domain, users do not have a choice to choose the product they use for their professional work, but this can cause them to work less efficiently, leading to less optimal Key Performance Indicators. It is essential to ensure that any application looks visually appealing to use. According to the participant interviews, designers often do not have the choice of making the interface look visually appealing using a B2B design system since the UI elements, like buttons and text fields, look visually dated. In B2B, showing enough data and improving clients' time on task are their main priorities (Vdovenko, 2023).

Importance of Affordance

Inculcating affordance while designing B2B interfaces using B2B design systems can be essential. It helps designers create interfaces that help the user afford tasks that they want to perform on the interface to achieve their goals. Affordances define what actions are possible (Norman, 2021). An affordance is a relationship between an object's properties and the users' capabilities that determine how the object could be used (Norman, 2021). While Don Norman is given credit for affordances, it is the seminal work of James Gibson as stated in the book *The Ecological Approach to Visual Perception*. He defines affordances as what objects offer, provide or furnish, either for good or ill. He further adds that the affordances of objects are extremely various. He suggests that what we perceive when we look at objects are their affordances, not qualities. He mentions that the concept of affordance is derived from the concepts of valence, invitation, and demand but with a crucial difference. The affordance of something does not change as the need of the observer changes (Gibson & Mace, 2015). In the context of UX and UI, affordances help users know what they should do without using labels, pictures, or instructions. A button, for example, is an affordance as it resembles the buttons that users encounter and push in real life. The likelihood of a user pushing a button is the button's affordance ("UXPin", 2023). Affordance is always taken into consideration when designing interfaces. As such, an affordance is not a "property" of an object. Instead, affordance is the relation between the user and the object (Interaction Design Foundation, 2016, What are Affordances?). As a professional designer, I have always thought about how we help users afford to use important functionalities over unimportant ones. It is always an interplay of many thoughts coming together. It is important to empathize with the end-user to ensure a better experience and efficient achievement of tasks. Some affordances are explicit, hidden, pattern, metaphorical, negative, and false. Affordances reduce user errors and cognitive load while improving the user experience. Putting the user first by researching their needs and context is essential. Logical and clear affordances help make it easy for the users to understand affordances intuitively ("UXPin", 2023).

Minimalism

Designing complex B2B SaaS interfaces results from excess information coming together. It can lead the designer to include many product functionalities, creating a cluttered user experience. Applying the principles of minimalism can adhere to this in more ways than one. Minimalism is a term used to describe art and music that are very similar and very different simultaneously (Obendorf, 2009). Minimalism deals with removing any excess elements that might be unnecessary and prioritizing the display of the most essential elements. Japanese traditional design and architecture highly influence designing minimalist designs. The works of De Stijl's artists are a primary reference: De Stijl expanded the ideas of expression by meticulously organizing essential elements such as lines and planes. ("Minimalism", n.d.).

As the age of user experience in digital user interfaces came along, so did the thought of including more accessible interactions for the user using the interface. The idea for any designer who designs the interface remains simple, i.e., help the user quickly achieve their user or business goals (Participant 3, Zoom Interview, January 7, 2024). Sometimes, excess information comes in the way of the thought of ease of use and achieving goals. It happens due to factors like a lack of proper hierarchical organization of information on the interface and the visually dated aesthetic of the UI (Participant 4, Zoom Interview, January 12, 2024).

Minimalism focuses on removing unnecessary elements and clutter from the design. The result is a clean and uncluttered interface. Users quickly understand and navigate through the interface by simplifying the visual presentation. The clarity in minimalist designs makes it easier for users to focus on the essential elements and tasks. Minimalism places the user's needs and goals at the forefront, which all designs should do, but minimalism does it best (DeWit, n.d.). Minimalism is essential in UX and UI design as it helps bring order to complexity. When designing interfaces, a designer needs to ensure that whatever is on the screen is what the user will interact with in their workflow (Participant 2, Zoom Interview, December 21, 2023). It is easy for UI designers to increase the quantity and variations of UI elements as the types of features increase. The number and types of UI elements should be minimal. These include symbols, icons, labels, font styles, font sizes, text colours, background colours, modalities, hierarchies, and menu items. While the elements should be minimal, designers should carefully consider this redundancy considering business requirements (Kim & Kang, 2007).

In his book *Minimalism Designing Simplicity*, Obendorf states the four notions of minimalism: Functional, Structural, Architectural, and Compositional minimalism. The four notions of minimalism recurred in different literatures of art and music. Five concepts repeatedly surface in different literature: a minimality of means, meaning, structure, use of patterns, and the the recipient's involvement in the work of art (Obendorf, 2009). Breaking down minimalism to understand it better and implement it into solutions can benefit the B2B design domain heavily. Applying minimalism from the lens of four distinct meanings can lead to significant clarity in B2B interfaces. Understanding how one may start applying minimalism while designing user interfaces is essential. Flattening is an integral part of designing a minimal interface. The belief is that they strengthen the subject and enhance user efficiency. Elements like images and buttons exist on the same plane, which makes the interface simple. It also reduces learning costs and cognitive impairment for the users. It emphasizes what is essential for the user (Dong, 2019). Highlighting the main body and reducing visual interference is crucial, as the interface is an integral structure. While designing UI form, it is necessary to visualize the function when the visual impact is minimized, which is also the central design concept in modern UI design. It is essential to emphasize functions and characteristics. Thoughtful consideration should be given to colour and image to make the features and functions more prominent (Dong, 2019).

On one hand, the concept and impact of minimalism extend from Modernism and its deep connections to colonialism and cultural erasure. Recently, scholars and design historians have come to terms with the displacement of local design cultures by modernist and Euro-centric design (Zabolotney, 2021). On the other hand, designers such as Naoto Fukasawa, Jasper Morrison, and Kenya Hara show us a poetic and unobtrusive approach to design.

In the book *Designing Japan: A Future Built on Aesthetics*, Kenya Hara says, “For the Japanese, it was a conscious, strategic materialization of ‘nothing-ness.’ It was a careful process of eliminating each and every excessive frill in order to create an empty vessel, at once a vacuum but with a powerful center of gravity, toward which people’s consciousness and creativity would be drawn.” (Kenya et al., 2022). Hara maintains that such aesthetics are unique to Japan, and calls them “emptiness” or “kanso (no-frills, basic and clean),” rather than “simplicity”. Jasper Morrison and Naoto Fukasawa describe supernormal as certain objects that are more discrete and anonymously designed outperform their counterparts with ease when it comes to long-term everyday use (Fukasawa & Morrison, 2007).

Research Summary and Next Steps

To summarize the insights, various commentators advocate for B2B UX and UI design to be made better. There is a consensus among commentators and participants that B2B design often lacks a good user experience and appealing interface because of the guidelines of a B2B design system. Designers often face creativity challenges while creating design solutions due to restrictions in a design system. It leads them to create solutions that are complex, not easy to use, less accessible, and not up to date with modern visual design standards. The conclusion draws from surveys, interviews, and participatory activities. In the next section, I build on the material gathered through my design research to construct a possible design solution to address designers’ challenges while creating B2B design solutions. The solutions aim to help designers design simple and easy-to-use B2B applications backed by emphasizing minimalism and appealing visual design.

Minima

Minima is a plural form of minimum. I named my prototype Minima as its domain deals with complexity, but I aim to solve it by inculcating minimalism. The idea behind the name lies at the core of this prototype’s framework.

As the process begins with defining the product’s user experience, I feel it is essential to start there. Information Architecture (IA) plays a pivotal role in determining the experience of using a product. Minima IA intends to help designers address UX design decisions by including structural and architectural minimalism. As the research insights suggest, designers may feel there is much information to show on the interface due to how they build it (Participant 3, Zoom Interview, January 7, 2024).

Furthermore, the research suggests that current B2B design systems create dissonance when designing better interfaces. Creating a design system that instills coherence, simplicity, and an up-to-date visual aesthetic is essential for B2B SaaS products. It is also necessary that the design system helps promote creativity and uniqueness over predefined layouts, as every idea needs a slightly different user interface.

When the participating designers were asked, “What might help them be more creative?” one of the many responses was the ability to design the user experience and interface with fewer guidelines and restrictions.

Minima Information Architecture

Minima IA is a tool that aims to help designers create structured information architecture by bringing order to information. It ensures a product's primary, secondary, tertiary, and quaternary information or tasks. It helps the designer segregate different user journeys according to importance and hierarchy. It helps them track what is immediate for the user and what comes after. In hindsight, IA allows designers to place things in a hierarchy when they create wireframes. Tagging interface elements with their priority helps designers create an interface that enables the user to focus on the product goals better.

The design of Minima IA Creator intends to be easy to use with the help of a simple user interface. The desktop-based tool has two viewing modes: light mode and dark mode. It helps make it more accessible and customizable to a user's preference. The default screen spans a grid background with a movable panel stationed at the bottom right of the screen, as seen in the Figure 20 below.

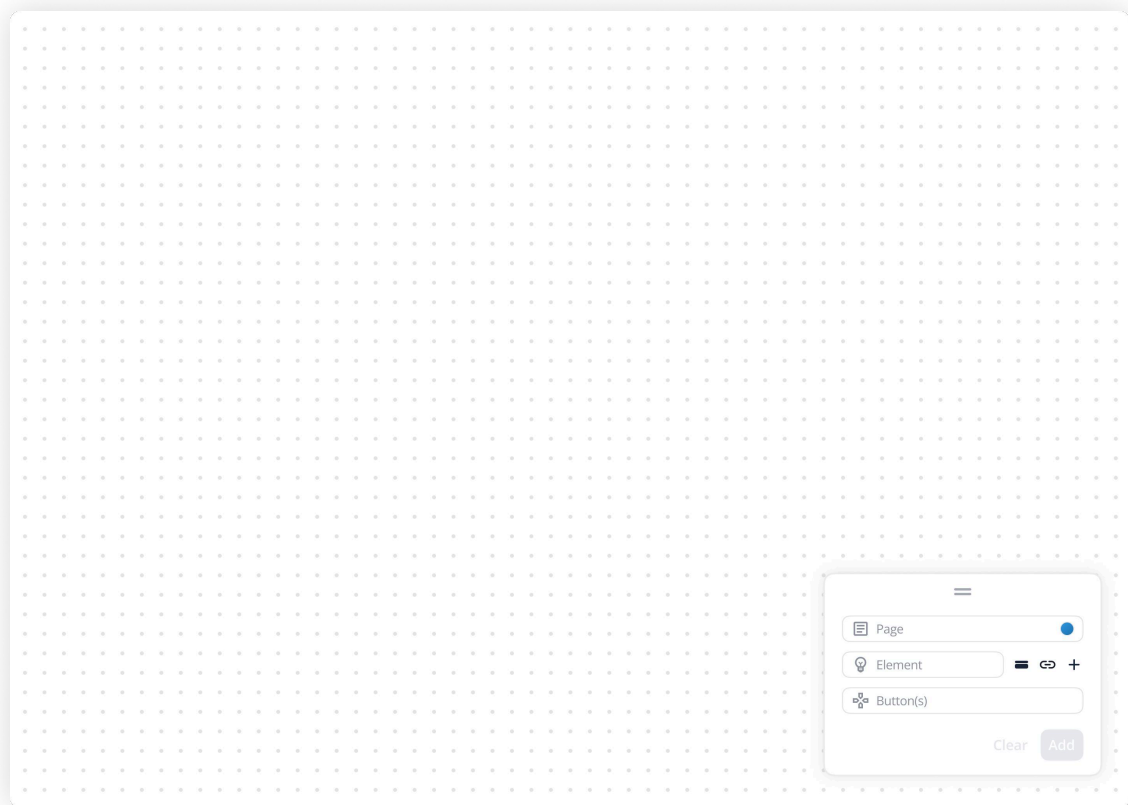


Figure 20. Minima Information Architecture creator

The panel contains Page, Element and Button(s). The Page enables the designer to create the primary page containing interface elements, e.g., the homepage. They may colour-code it as they like by clicking on the colour picker at the extreme right of the field. Element can add elements to a page by clicking the Add (+) icon. Elements can be nested within other elements, and designers can tag their importance so when they make interfaces, they can prioritize elements. It will help them reduce clutter while designing. The thought of Architectural and Structural minimalism inspires this idea.

Button(s) help them add any necessary CTAs they might want to add to the page to track what the page primarily does.

As they fill the fields on the panel, the visualization of the information already starts appearing on the canvas in what looks like a ghost appearance. It provides the designer with context to what they are making. The user may click the hierarchy icon next to the element field to tag the element. Post the click, they will see a list of hierarchies with which they can tag the element. The element is tagged Primary in this use-case, denoted by a green dot.

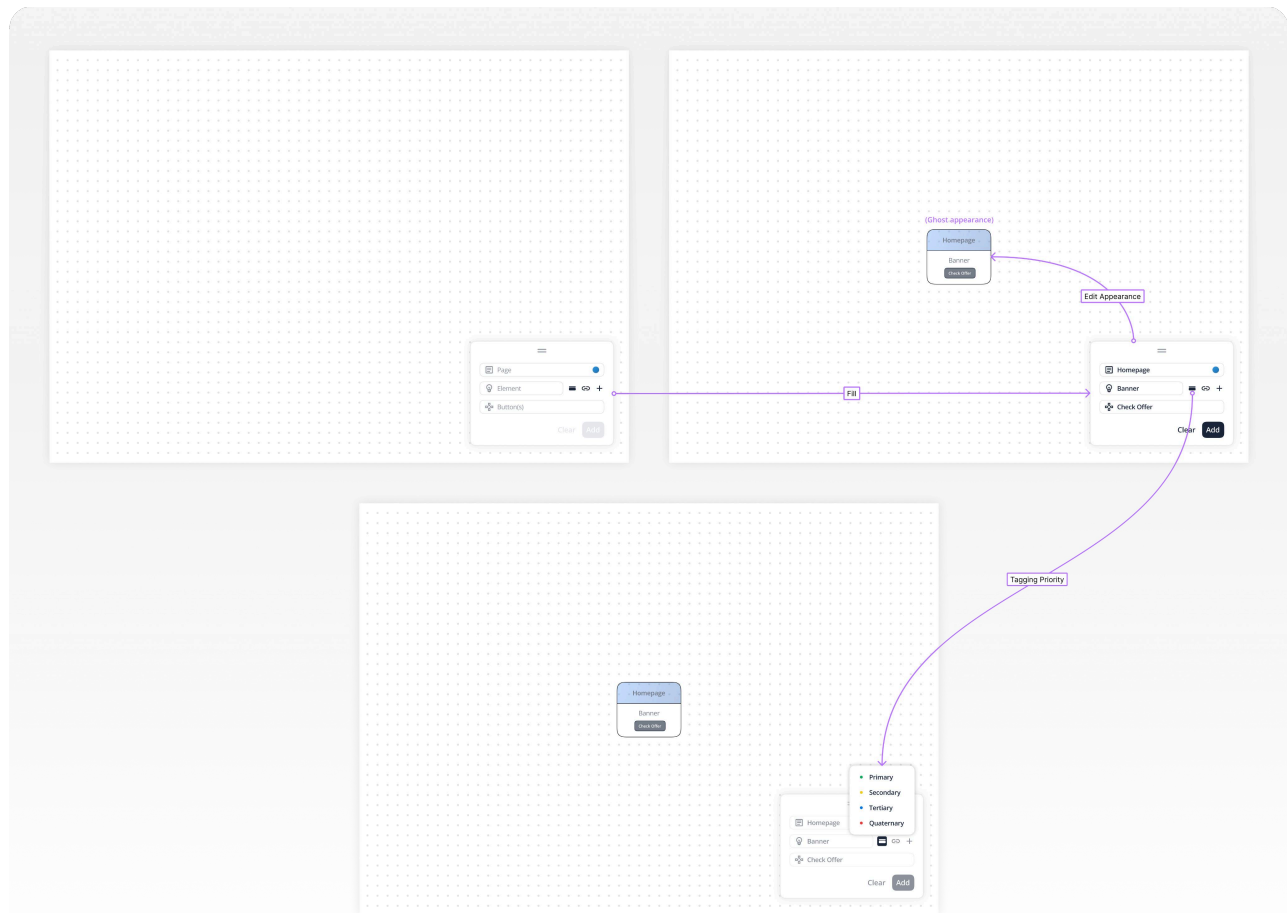


Figure 21. Designers tag the element on its hierarchical importance

To nest an element within another element, designers can click on the link icon and attach it to any elements from the list. To delete an element, designers just need to click on the minus icon next to the element.

The interactions are simple. The idea is to let designers achieve the product goal quickly without significant distractions. The research insights gathered from participating designers and various commentators inspire the thought of a simple and intuitive user experience.

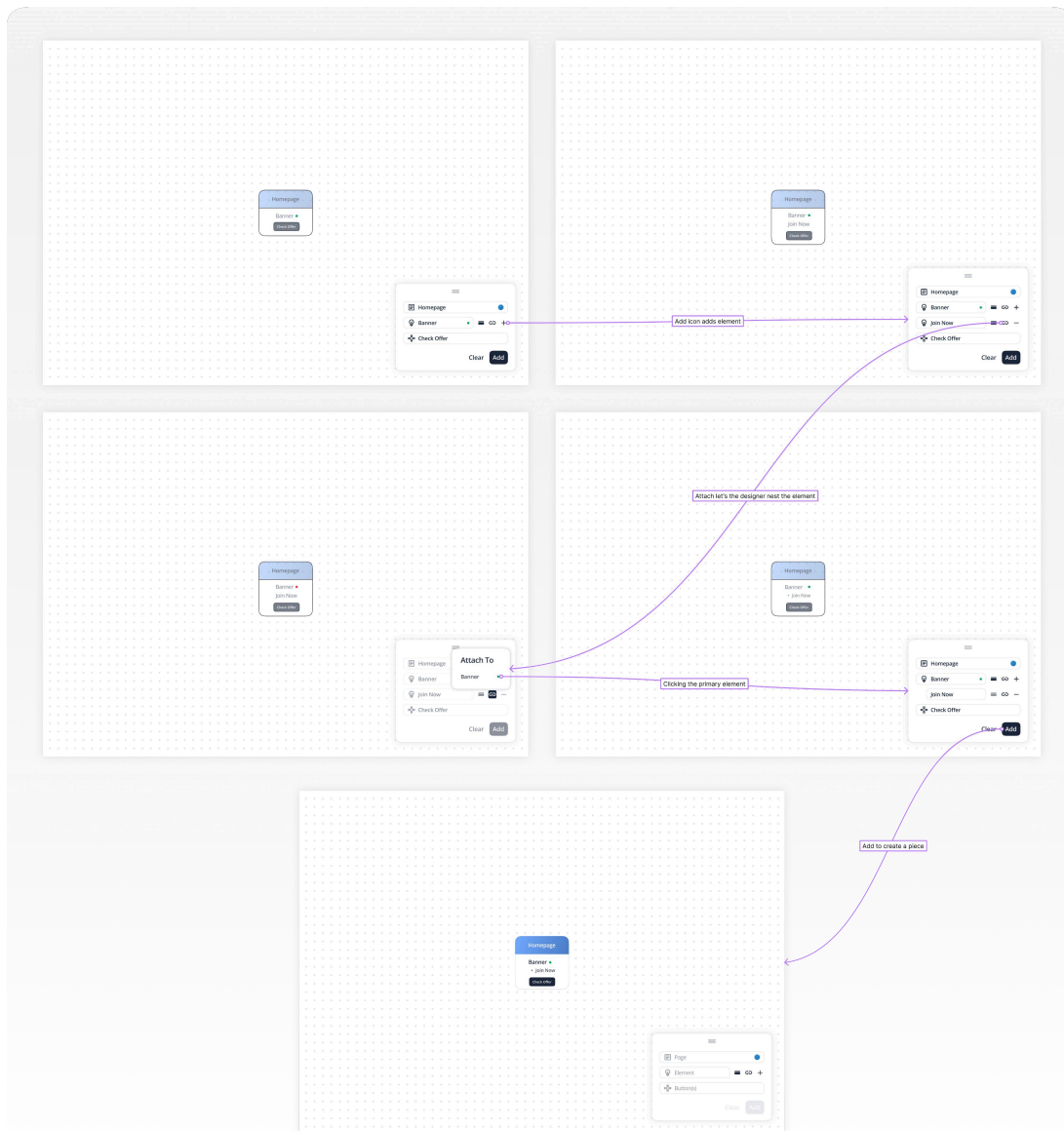


Figure 22. The Designer adds another element to the flow, attaching it as a sub-element to the main element and adding the information architecture

If the designer wants to edit any part of the information architecture, they may hover over the piece and click the edit icon. It will put the component back in the ghost state, and the panel will help change the information and attributes. Once done, they may click on save to confirm or cancel to undo any changes.

The interactions are simple. The idea is to let designers achieve the product goal quickly without significant distractions. The research insights gathered from participating designers and various commentators inspire the thought of a simple and intuitive user experience.

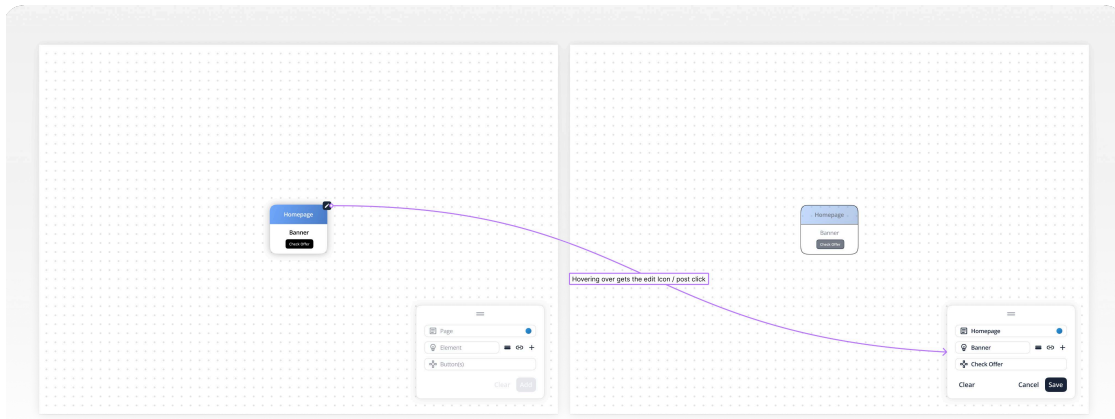


Figure 23. Designer editing the information architecture piece

Minima Design System (MDS)

Minima Design System helps designers design B2B interfaces more creatively by giving them more agency over how they choose to design, guided by current UX and UI design patterns and practices, and better visual design strategy. Its core values are aesthetics, minimalism, and simplicity. Designers need more creativity when they use B2B design systems to create better interfaces. Currently, Minima Design System supports four platforms: *Desktop*, *Laptop*, *Tablet*, and *Mobile*.

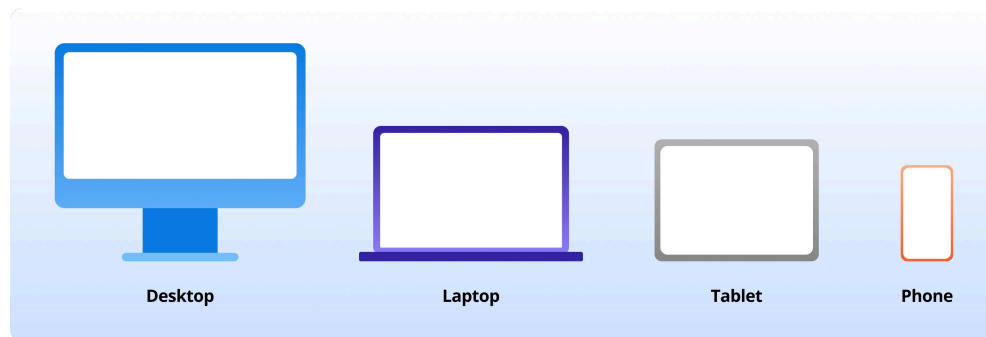


Figure 24. Platforms that Minima Design System supports

This design system helps designers create uncluttered B2B interfaces, empower creativity, and create purposeful solutions that help users achieve their tasks efficiently. Currently, the design system comprises two pieces: *Fundamentals* and *Elements*.

Fundamentals

Fundamentals cover how designers can use the Minima Design System and its components to make user interfaces. Its guidelines help designers create impactful solutions advocated by minimalism and simplicity. It was essential to introduce fewer guidelines that designers could easily interpret as they helped design more and read less. Insights received in the interview phase invoke the thought that Participant 6 said it matters how guidelines are presented to the designer by the design system as it may impact learning duration (Zoom Interview, January 14, 2024).

Foundations

The design system is focused mainly on minimalism, and visual aesthetics are a core value. It lets the designer create visually appealing interfaces and helps the designer focus on what to consider while designing solutions. **Minimalism** is considered vital in designing interfaces as it helps bring focus to functions that the user needs to use to achieve business goals. With this thought, designers can create interfaces that lack clutter and focus on the product's primary functions. It intends to increase user efficiency. The key idea with **Simplicity** is to help designers create simple solutions for users to comprehend. B2B solutions are complex as they involve heavy information. Simplicity derives from bringing order to complexity. It is not just a visual style, minimalism, or absence of clutter (Isaacson, 2011). **Aesthetics** are essential in user interface design, and this principle helps designers ensure that their interface looks fresh and delightful.

Colours

It is crucial to infuse colours in interfaces as it may help define user visual patterns. Participant 5 remarked that accessibility in B2B design is scarce and needs to be included (Zoom Interview, January 13, 2024). Participant 6 said that B2B design systems lack accessibility. Some users might have colour blindness and would not be able to see text against a background. The designers must implement these thoughts (Participant 6, Zoom Interview, January 14, 2024). The interface has a defined, subtle, but accessible colour palette. It has primary colours, greyscale, system, and sequential colours. While these colours are the design system standard, designers remain free to create and use their colour scheme. WCAG is a set of recommendations designed to make the Internet more accessible for people with disabilities (Ch, 2023). These guidelines are a standard that designers can use to ensure that all colours are accessible. The design system instructs the designers to use colours that create appropriate contrast and follow WCAG AA compliance to ensure the colours they use are accessible.

Type & Icon Default / Greyscale / System Colours / Sequential Colours

8 - High Prominence 1 - Low Prominence



B10 - Highest Prominence B0 - Lowest Prominence

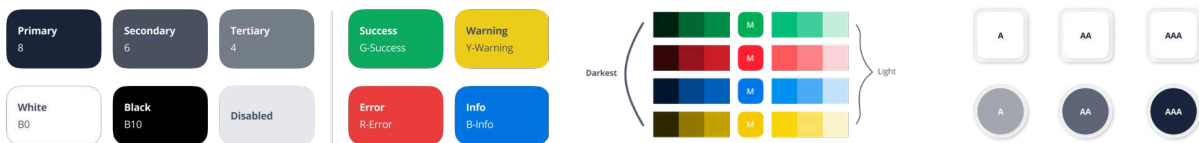


Figure 25. Colours in Minima Design System

Iconography

Ensuring that icons complement the interface and look cognitively settled is essential. For example, the Minima Design System instructs the designers to pixel-perfect and optically align the icons to create a sense of symmetry and consistency. Collectively, according to research insights, it gives a more symmetrical visual affordance to each element on the interface and ensures visual consistency that B2B applications may lack.

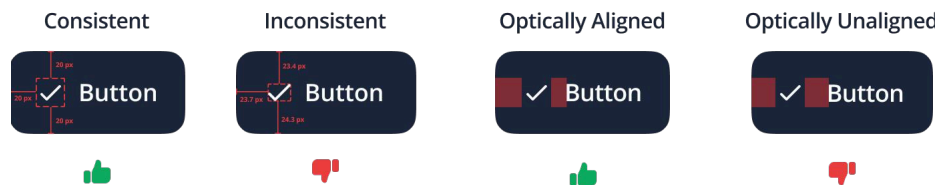


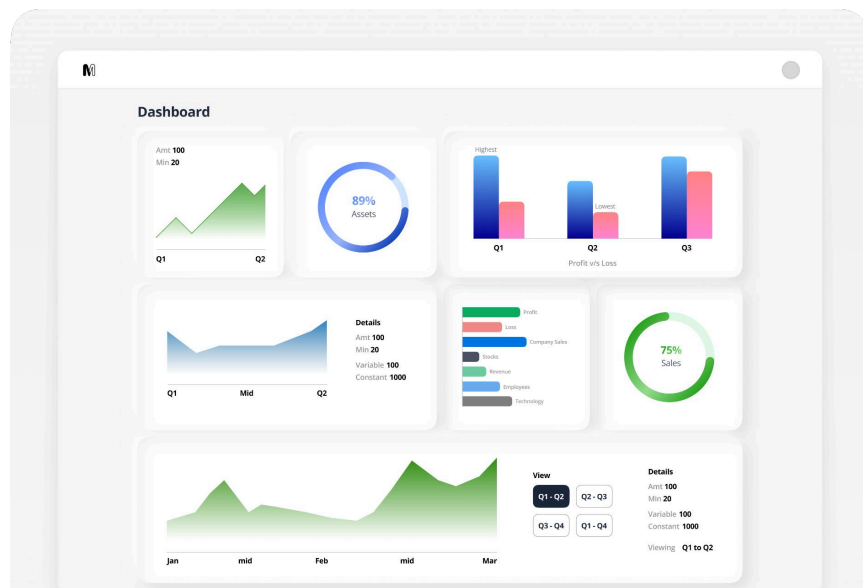
Figure 26. Icon placement guidelines

Layouts

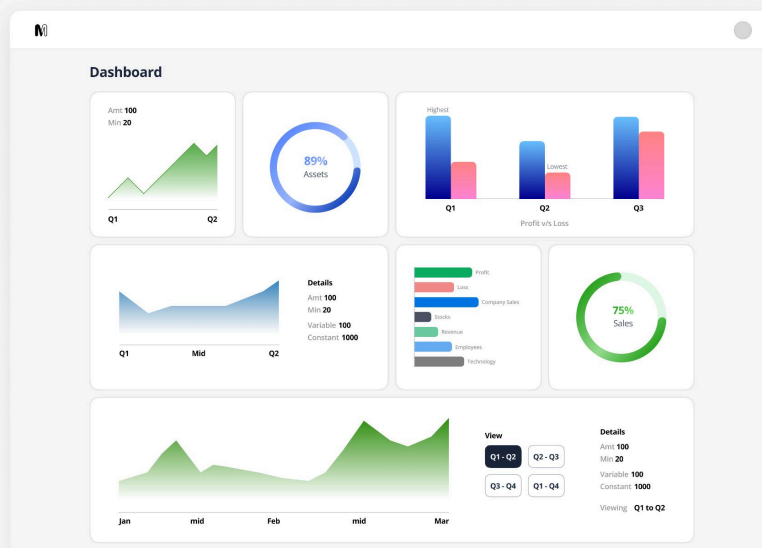
Contrary to other design systems, the Minima Design System intends to give creative freedom to designers to ensure engaging interfaces. Christopher Alexander states, “Each solution is stated in such a way that it gives essential field of relationships needed to solve problem, but in a very less general and abstract way—so that you can solve the problem for yourself, in your own way, by adapting it to your preferences, and the local conditions at the place where you are making it” (Alexander et al., 2010). This gives designers agency. The idea with layouts is that designers can create better layouts that suit the solution. The screen has three segments: Header, Body, and Footer. Designers can also refer to specific predefined layouts from the design system should they choose to use them. These layouts include standard B2B design patterns like a list page, dashboard widgets page, 2-column and 3-column division page and stepper wizard. They are also available in different visual designs like neomorphism, linear, and elevated. The idea is to construct a beacon for designers to begin designing. Although these predefined layouts are not mandatory to follow as they are, designers may modify them according to the design solution requirements.



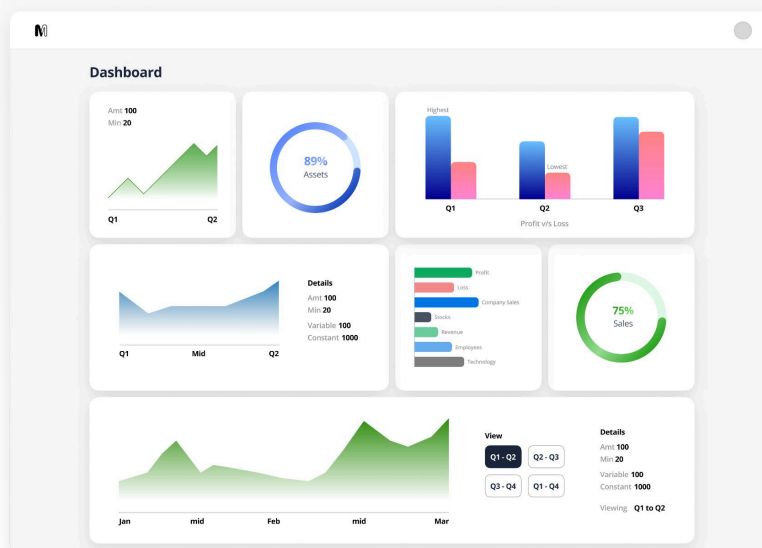
Figure 27. Layout segmentation



Neomorphic



Linear



Elevated

Figure 28. Dashboard Layout in Minima Design System

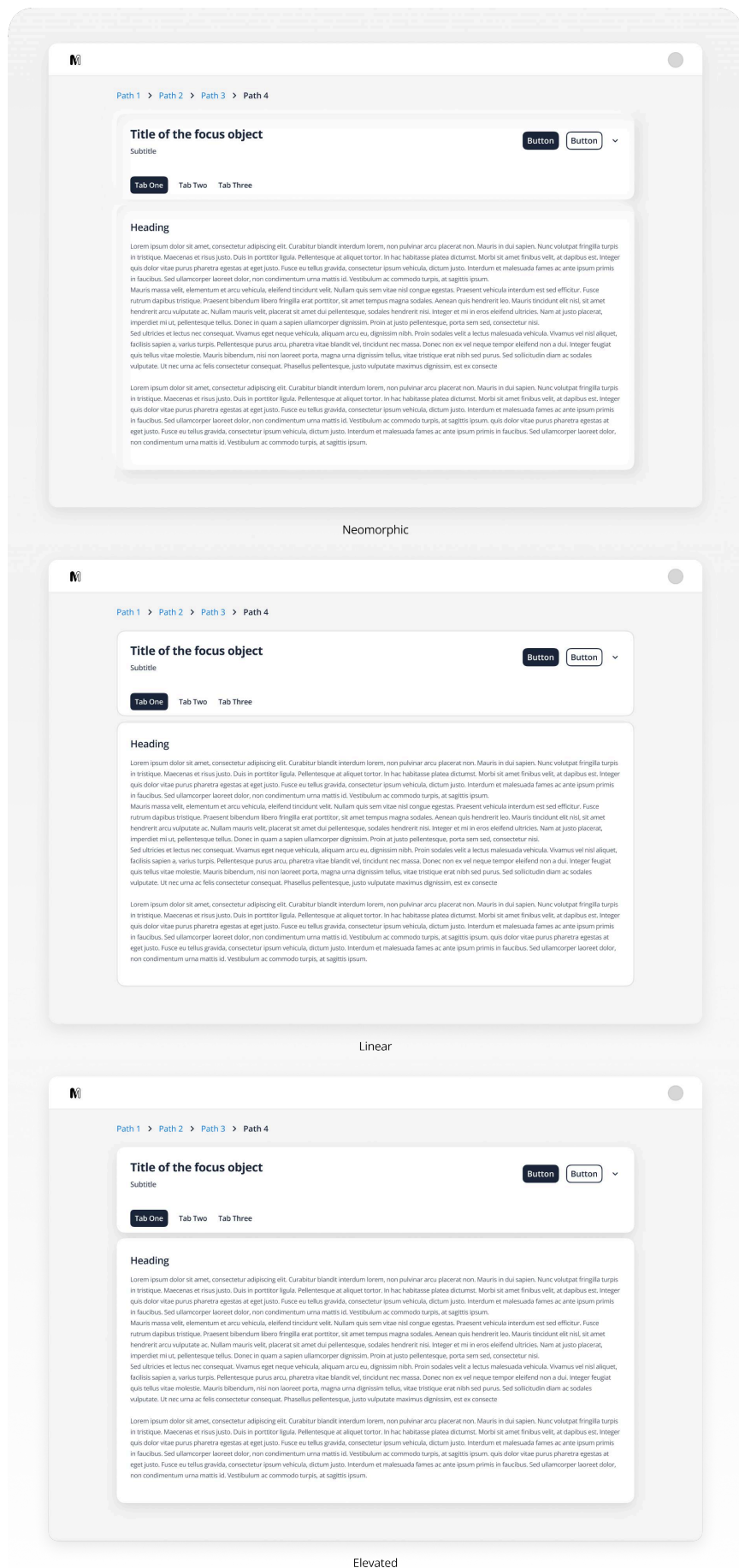


Figure 29. Header and Body layout in Minima Design System

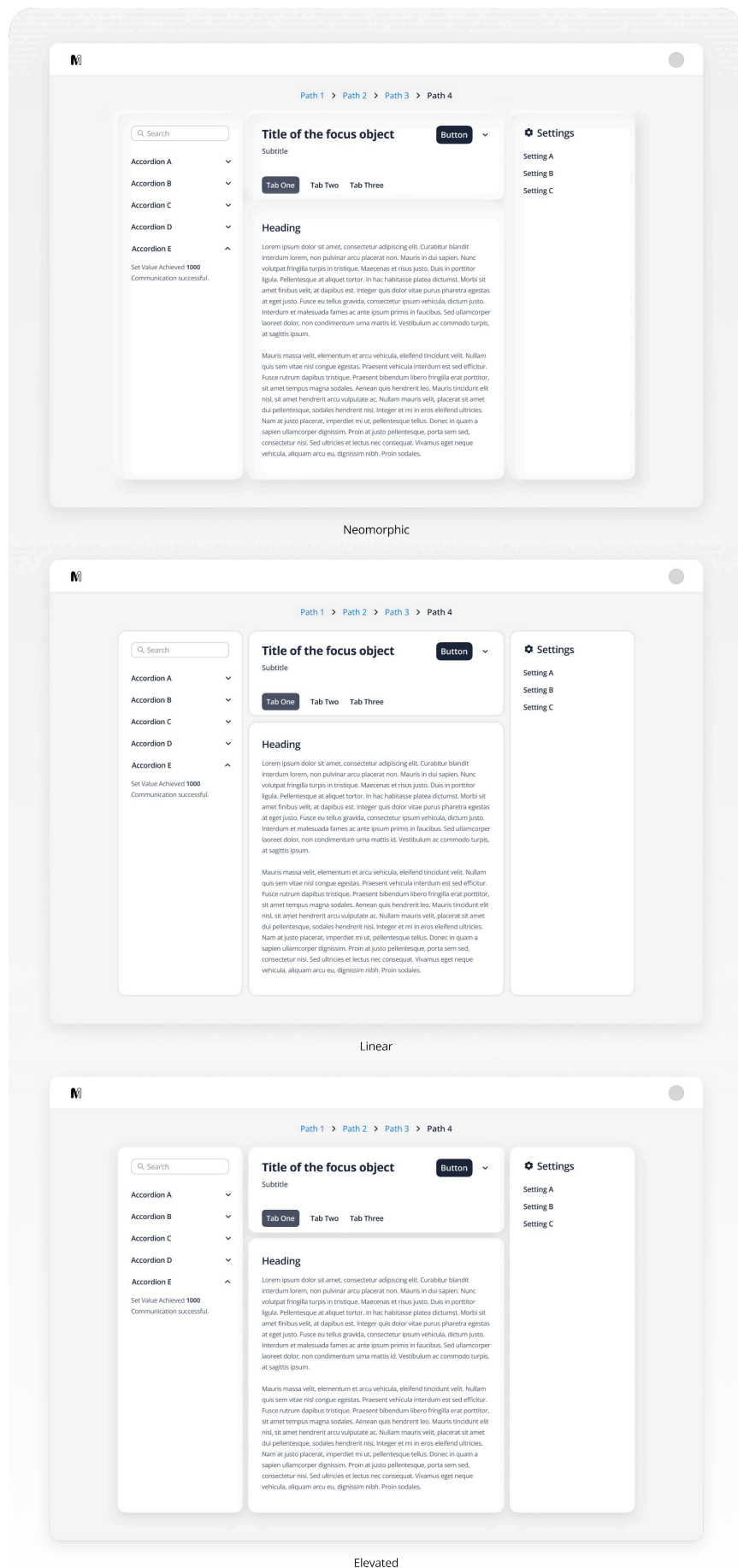


Figure 30. Three column division layout in Minima Design System

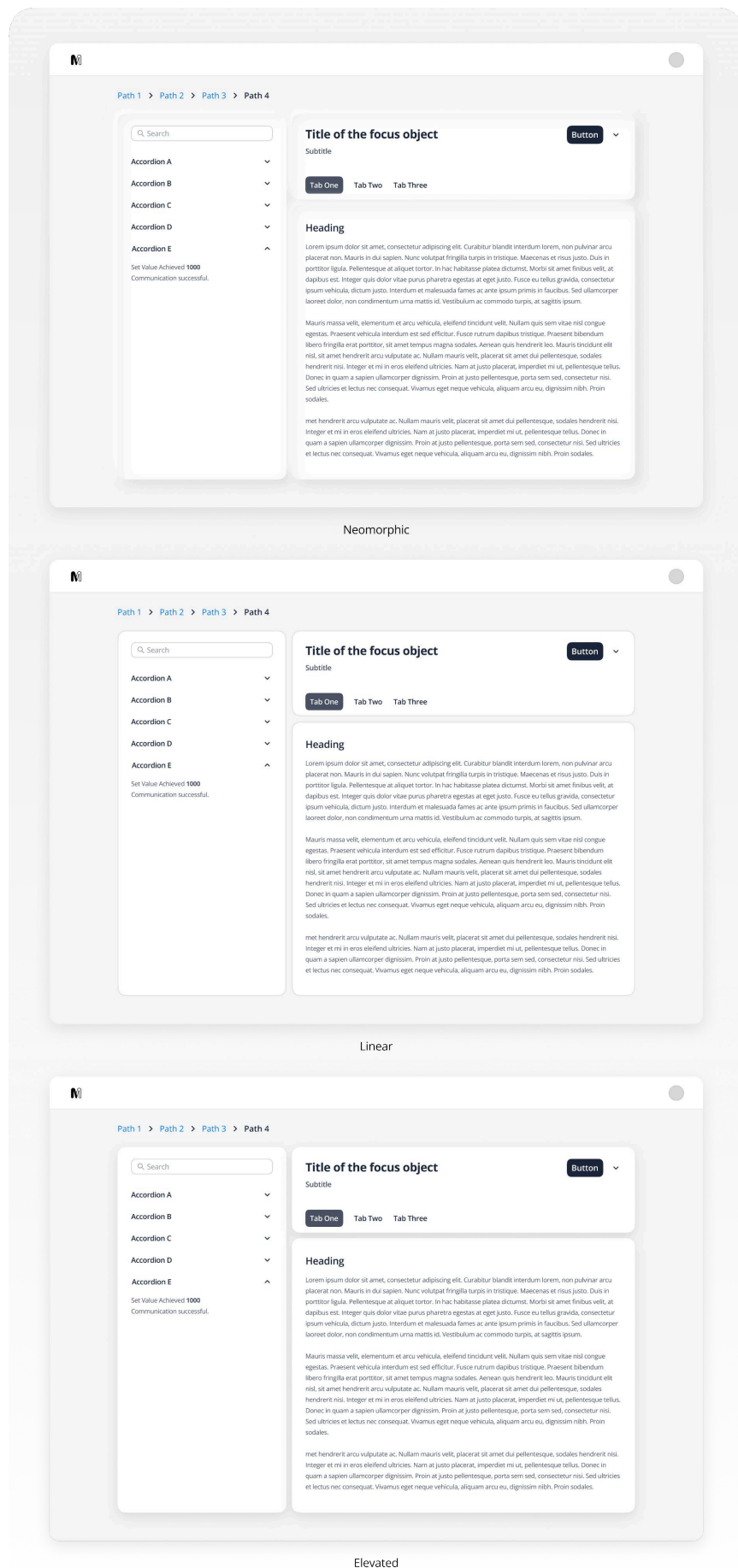


Figure 31. Two column division layout in Minima Design System

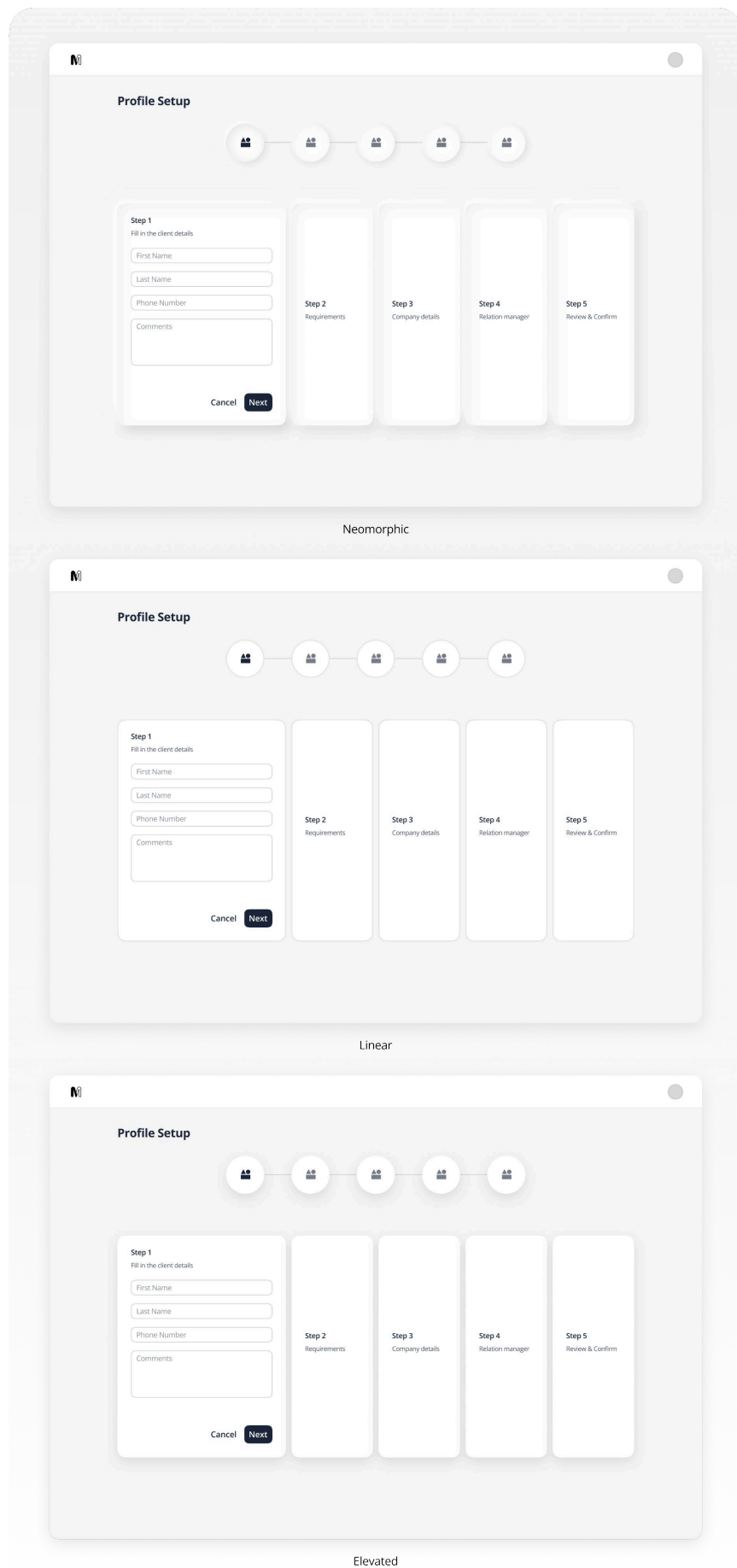


Figure 32. Wizard layout in Minima Design System

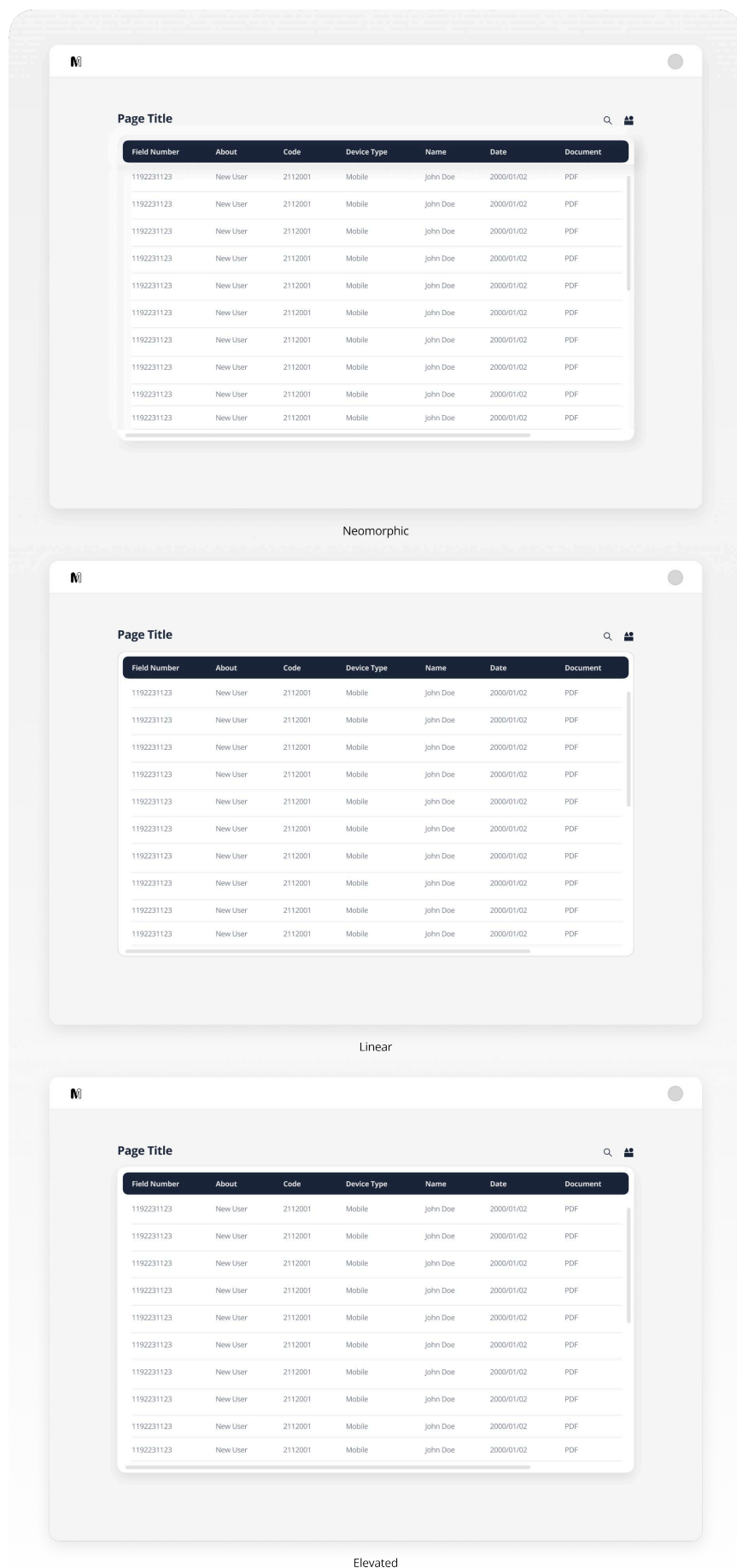


Figure 33. List page layout in Minima Design System

While designing for different devices, it is crucial to consider scalability. Predefined grid structures for different devices help keep the designs intact. Designers can use these grid structures from the Minima Design System.

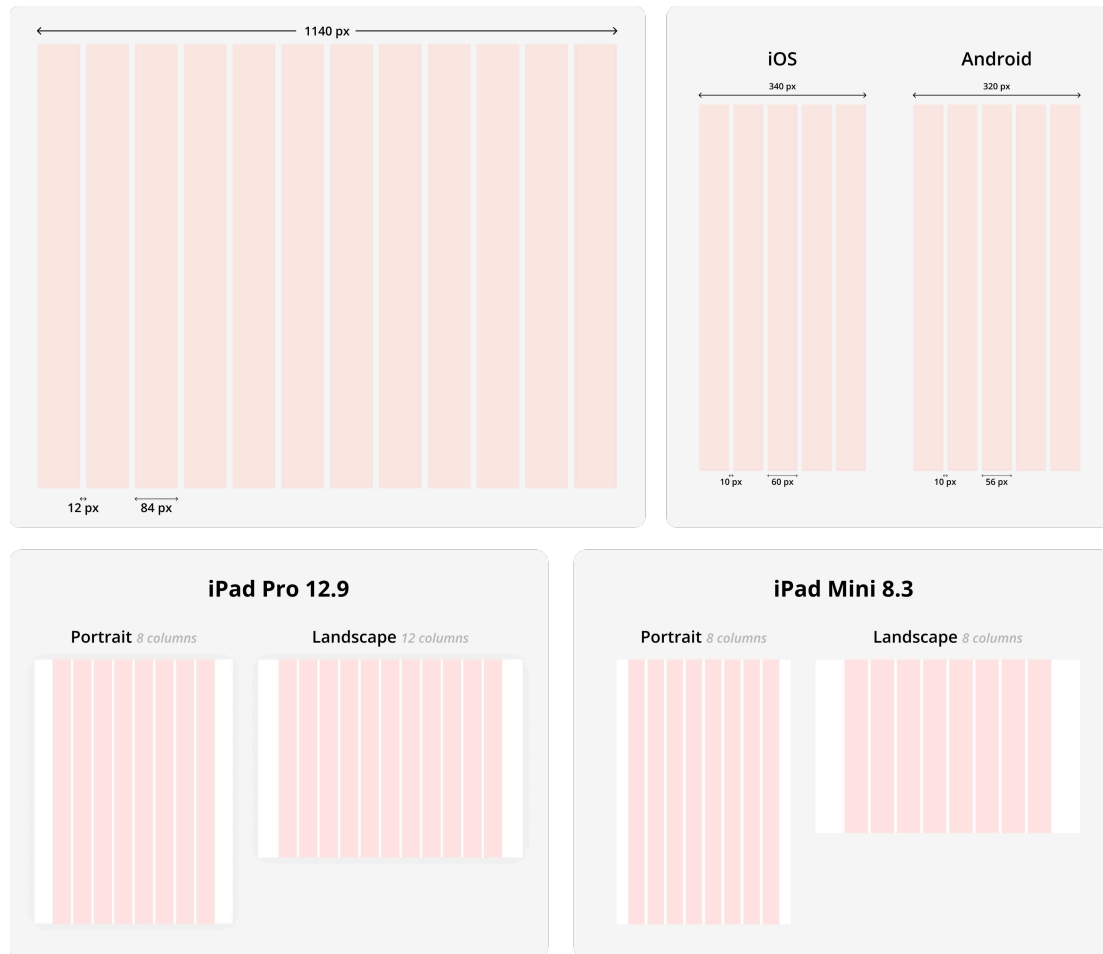


Figure 34. Grid Structures

Motion

The use of motion is emphasized in the Minima Design System as it helps designers inculcate affordances in the interface. It also adds a sense of visual feedback. It makes the user more comfortable with their actions. They keep the user informed and assure them whether the application/software works, which is a significant part of UX design. Animations also add character to user interfaces, making them more fun (Lomakina, 2017). If animations are designed well, they could reduce cognitive load for problem-solving tasks (Ayres & Paas, 2007). Motion may be defined according to eye movement. According to SAP Fiori Design Guidelines, eye movement takes 230ms (Fiori for Web Design Guidelines, 2023).

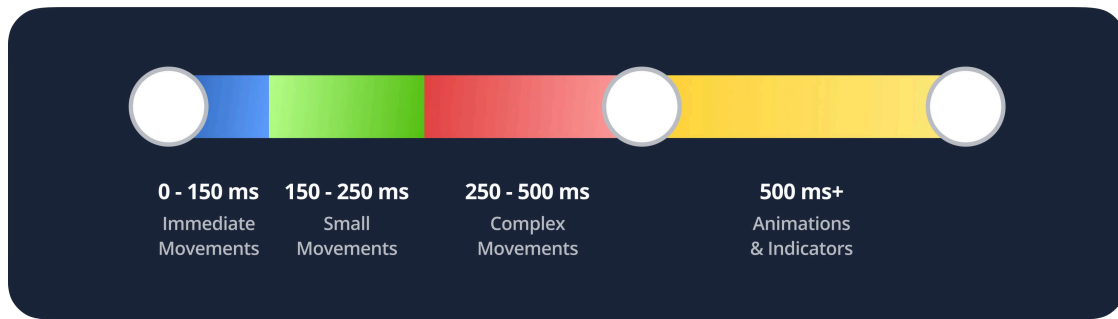


Figure 35. Motion timeframe

Typography

The interfaces use Google's Open Sans typeface as a standard. In interviews, participants 5 and 6 highlighted the importance of accessibility, especially in legibility of text. The design system offers up to 8 different text sizes that may help design interfaces which are more accessible. The typeface has different font styles and attributes. It has five font weights: Light, Regular, Semi-Bold, Bold, and Extra-Bold.

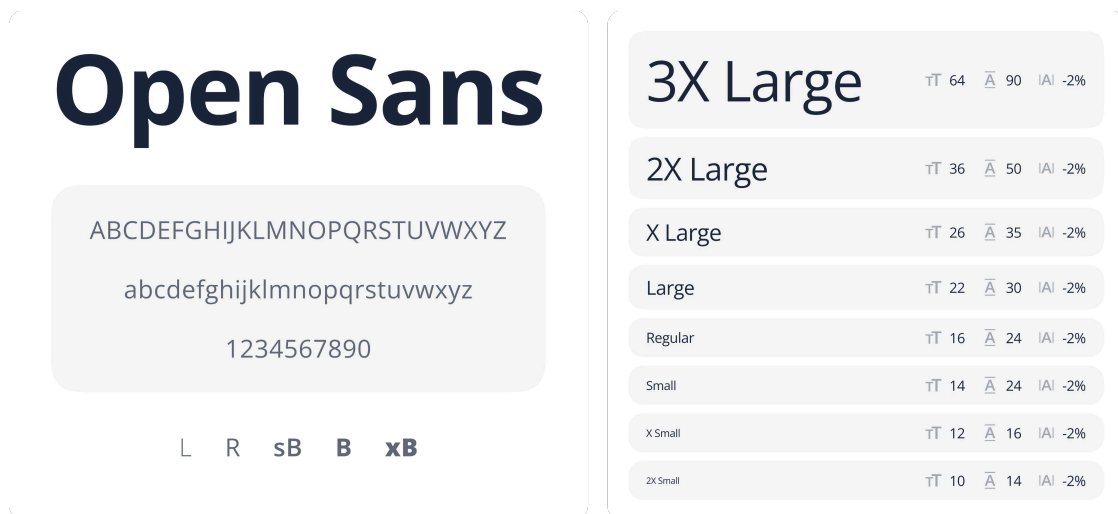


Figure 36. Typeface and its attributes

Dark Mode

Dark-themed interfaces are almost everywhere today. Using dark mode reduces the strain on the eye, particularly in environments with less or no light (Erickson et al., 2020). In darker environments, dark mode reduces eye strain significantly and feels more natural since it mimics the lighting condition of the environment itself (Eisfeld & Kristallovich, 2020).

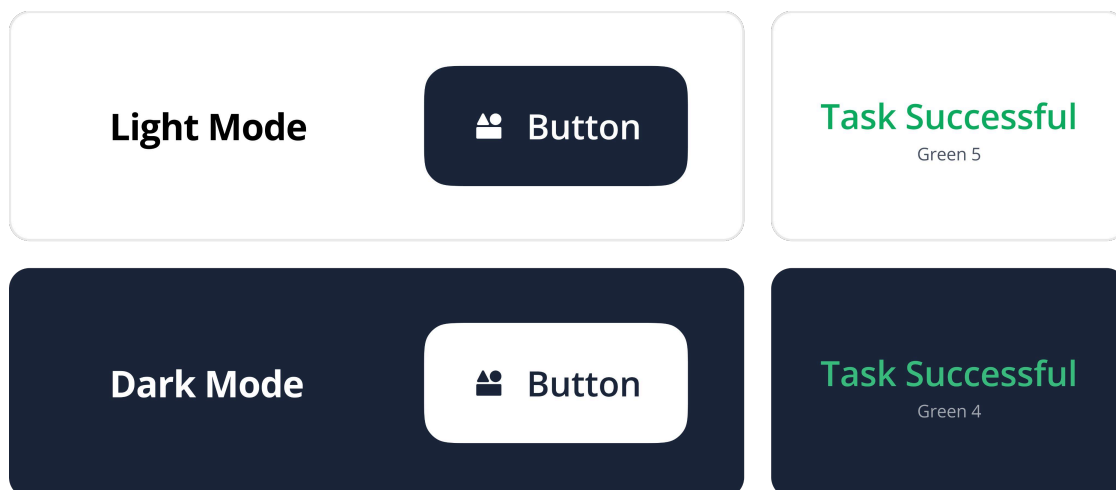


Figure 37. Light Mode and Dark Mode

Scalability

The Design System ensures scalability for UI components and layouts. Designers actively improvise upon the standards of the design system by scaling solutions, for instance, breaking down predefined page layouts or adding more elements. For example, designers may scale widgets in different sizes to show more information.



Figure 38. Scalability in a Data Visualisation component

Elements

Minima Design System has certain predefined elements that designers can use in their design solutions. These elements may include page layouts, text fields, and buttons. UI elements help designers save time and reduce effort. MDS helps designers by providing these elements based on minimalism and better visual aesthetics. Designers have freedom over how they want the interface to look and feel. MDS has provisions for modern design aesthetics like neomorphism, glass-morphism and flat design. There are provisions in the MDS that allow the use of different visual design languages that help designers orient their design solutions toward a specific demographic.

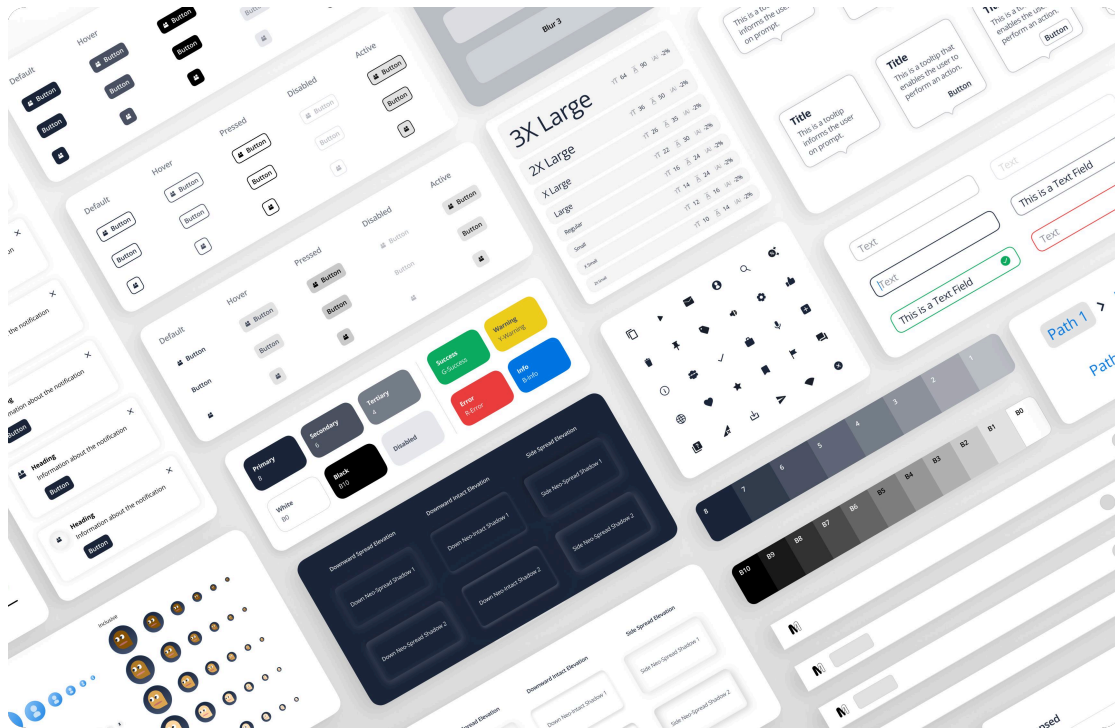


Figure 39. Minima Design System Elements overview.

Neomorphism

It is a design trend that is a combination of skeuomorphism and flat design. Neomorphism was first presented in 2019 by Alexander Plyuto, who was trying to find a mutual point to balance skeuomorphism and flat design. It uses inner shadows well to create subtle light effects to reflect 3D features but not over-represent (Mu et al., 2023). It makes it easy for the users to interact and understand the elements of a screen to improve its usability. It can create depth and dimension in a design for a quality product that meets the user's expectations (Mehta & Kumathekar, 2023).

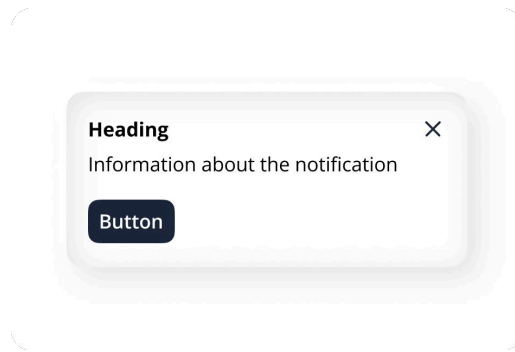


Figure 40. Neomorphism

Glass Morphism

It comprises emerging design trends and provides a translucent, glass-like appearance to user interfaces (Mehta & Kumathekar, 2023). Glass morphism creates semi-transparency with a blurred background, allowing users to see through from the virtual "frosted glass" while still focusing on the contents on the top "frosted glass." It inherits the texture mimicking from skeuomorphism. UIs become three-dimensional (3D) again (Mu et al., 2023).

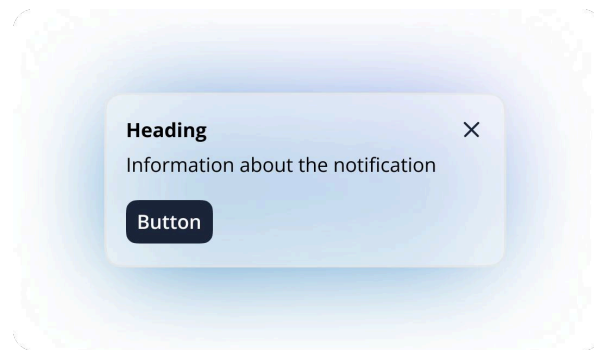


Figure 41. Glass Morphism

Flat Design

The design focuses on clean typography, vibrant colours, dimensional illustrations, and subtle shapes. It results in an aesthetically pleasing, high-quality, user-friendly experience (Mehta & Kumathekar, 2023). In 2012, Windows 8 and iOS 7 updated their UI design style to flat design. It led to a significant turn in UI style trends. The flat design depicts minimal characteristics of the natural world, omitting concrete physical properties (Bollini, 2017).

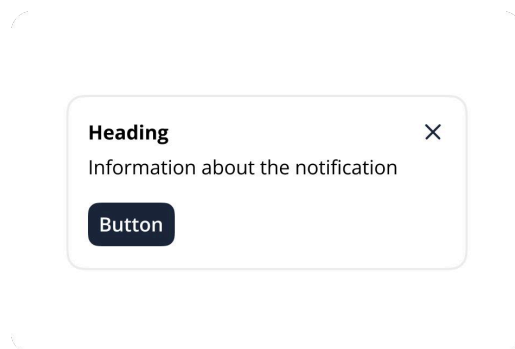


Figure 42. Flat Design

Testing

Prompt for Participants (Designers)

To understand how the Minima IA creator and Design System can help designers create better B2B interfaces, I created specific prompts that they can use to design solutions using the Minima Framework.

Prompt 1) Develop a Point-of-Sale User Interface (UI) optimized for efficient product transactions. Incorporate a comprehensive array of product details to facilitate a seamless user experience for sellers. Key components include a Header for navigational clarity, product listings featuring essential elements such as images, names, specifications, materials, return policies, and costs, and a prominently placed Proceed to Sell button. Additionally, supplementary features should be considered favourable to enhanced usability. Design the interface focusing on desktop and tablet resolutions to ensure platform versatility.

Prompt 2) Design a user-friendly inventory list page engineered to streamline user item accessibility. This interface features a Header for intuitive navigation alongside a comprehensive product list detailing the date of addition, unique alphanumeric identifiers, costs, availability status, restocking feasibility, and reservation quantities. Integrated functionalities include options to edit, delete, add, and search for items, ensuring efficient inventory management. Additionally, supplementary features deemed essential for optimized usability within the interface design should be incorporated.

Prompt 3) Develop a sophisticated wizard interface to facilitate streamlined business transactions, focusing on a singular step to ensure optimal user experience. This step incorporates essential elements such as a clear title, a concise list of added items available for purchase alongside customizable quantities, intuitive options to add or remove items, and prompts to confirm payment method and address details. Additionally, gives users the choice to specify delivery preferences to suit their needs. Upon successful transaction completion, the interface provides users with vital information, including the order number, scheduled delivery date, and access to comprehensive customer support resources, thus instilling confidence and ensuring seamless progression throughout the purchasing journey.

I created the prompts based on my industry experience with B2B interfaces. They are closely related to my work and other participating designers' fields. These prompts helped me understand how well the solution can help designers. Participating designers had the choice to design for any given prompt.

Minima Information Architecture

I started by asking them whether they organize information provided to create a user interface. Participant 1 said they create user flows and information architectures in the form of flow charts (Zoom Interview, March 15, 2024). When asked how they keep track of what should come first in the interface, they responded that it gets tricky, but they manually highlight what comes first.

It gives an exciting insight into the cumbersome process of assigning hierarchy in information architectures (Participant 1, Zoom Interview, March 15, 2024). When introduced to Minima IA creator, they remarked that it would make creating IA much more manageable. They said it eliminated excess steps and helped them improve the IA (Participant 1, Zoom Interview, March 15, 2024). Participant 2 had similar thoughts, although they said they like the process of manually creating information architectures and screen flows. Adding to the conversation, they remarked that they would not mind a tool like Minima IA Creator that helps them create it promptly, as one might not always have time to create an IA manually. (Participant 2, Zoom Interview, March 15, 2024). Participant 3 added that they liked simply creating IA using Minima IA Creator. They also said it could be more customizable for designers, as they can be picky about how they want to make things look (Participant 3, Zoom Interview, March 13, 2024). I believe that is essential for a designer, as it adds a sense of personalization and customization for the designer.

Minima Design System

While designing prompts one and two, Participant 1 said they liked how the design system allowed them to create an interface solution with more customization instead of following many guidelines to design it a certain way. They also stated that everything is sorted well in the design system, so it is easy to understand how to use a particular component. They remarked that it looks modern, simple, and pleasing. They said it helps them be creative while creating a solution. It is astonishing to see how a design system built with simplicity and freedom of creativity can positively influence how designers create interfaces. Their designed solutions look unique yet coherent, simple, and easy to use. They added they found problem-solving using this design system effective without being overwhelmed by excessive options. "Yes, Minima helped me design better solutions in more than one way," they continued, "it made me focus on what is truly important, ensuring the designs are clear, user-friendly, and effective" (Participant 1, March 14, 2024). They found Minima to be better than other B2B design systems as it is simple and focuses on essential parts that help streamline the design process. "The approach reduces the complex nature of B2B designs and helps easier and smoother user experience for users and designers". They remarked that enhancing the documentation with more examples and ways to use the design system can help new designers and developers adopt it effectively (Participant 1, Figma, March 14, 2024).

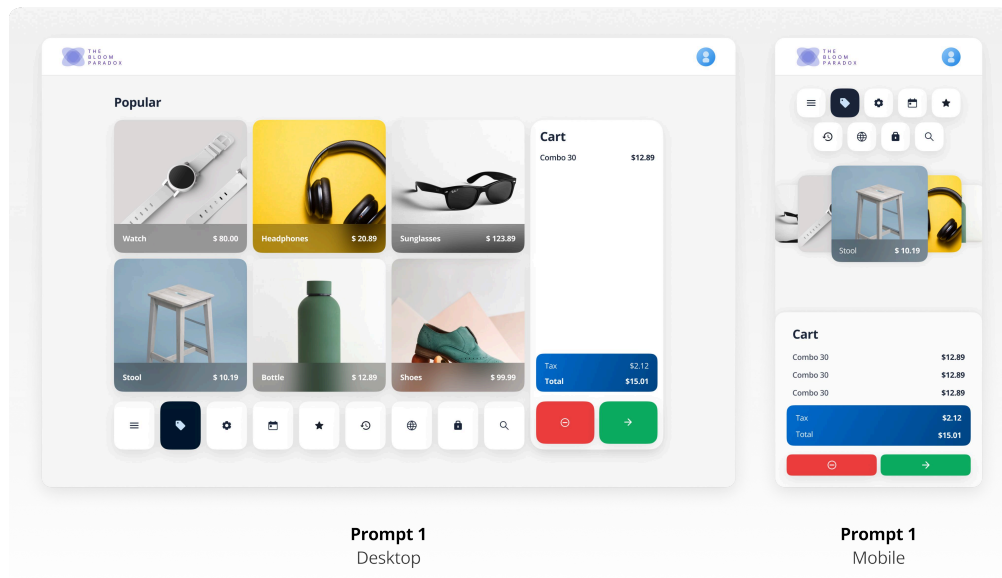


Figure 43. Participant 1's design of Prompt 1 on Desktop and Mobile resolution using Minima Design System

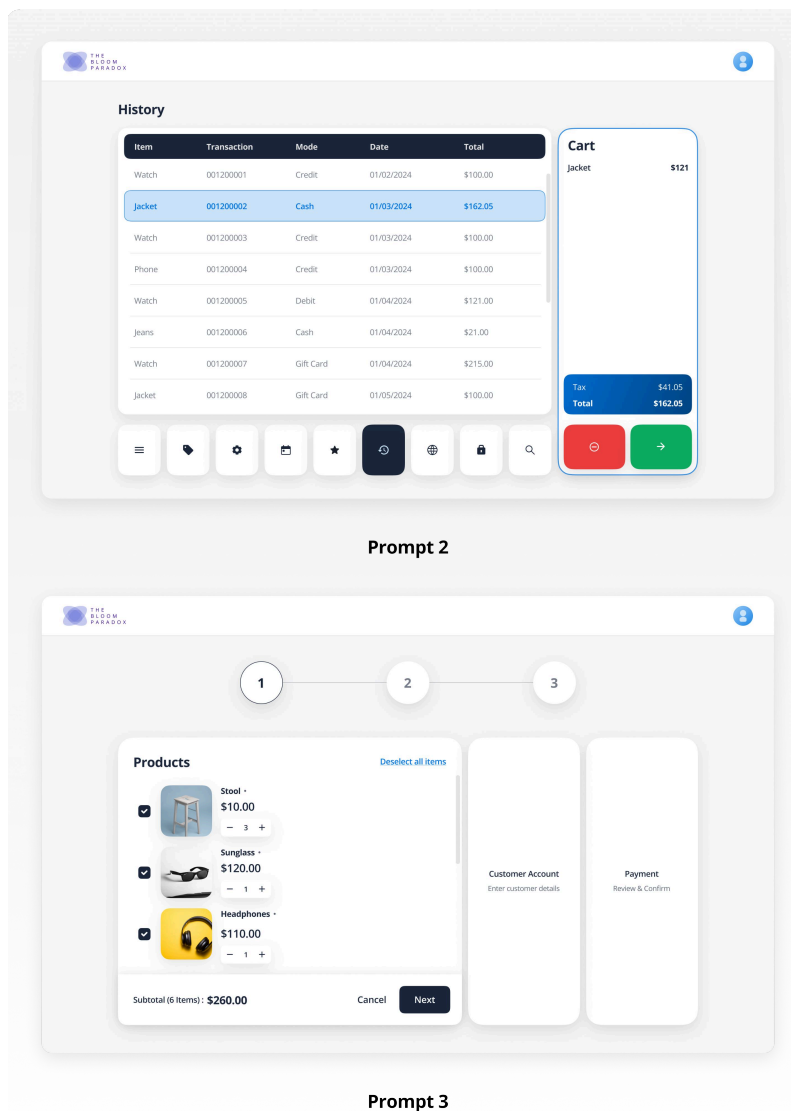


Figure 44. Participant 1's design of Prompt 2 and Prompt 3 using Minima Design System

Participant 2 said that all components are uniform in visual design. They also added that it looks consistent, which makes it cohesive and user-friendly. They further said that the elements and components in Minima are easy to use and implement. They said the documentation was excellent, concise, and easy to understand. Minima framework helped them be more creative by handling repetitive design tasks as the system frees up mental space for designers to explore new ideas and solutions. They also stated that the system provides a foundation for building and allows them to experiment with layouts and interactions within a consistent framework. It helped them prioritize user needs and come up with innovative solutions. "The design system provides a structured approach," they continued. It offers a range of flexible components that can be combined and adapted to create interfaces. They remark that the system allows the designer to focus on specific user problems and creatively use the system's elements to solve them. According to them, they could design better, emphasizing usability, consistency, and quicker design explorations. They found the Minima Design System better than other B2B design systems in specific categories. They said the system covers a good range of B2B design needs, contains friendlier documentation and component implementation, allows for customization, and focuses on inclusivity and community support by including various skin tones for avatars. They added that they want to see more components and bridge specific documentation gaps (Participant 2, Figma, March 14, 2024).

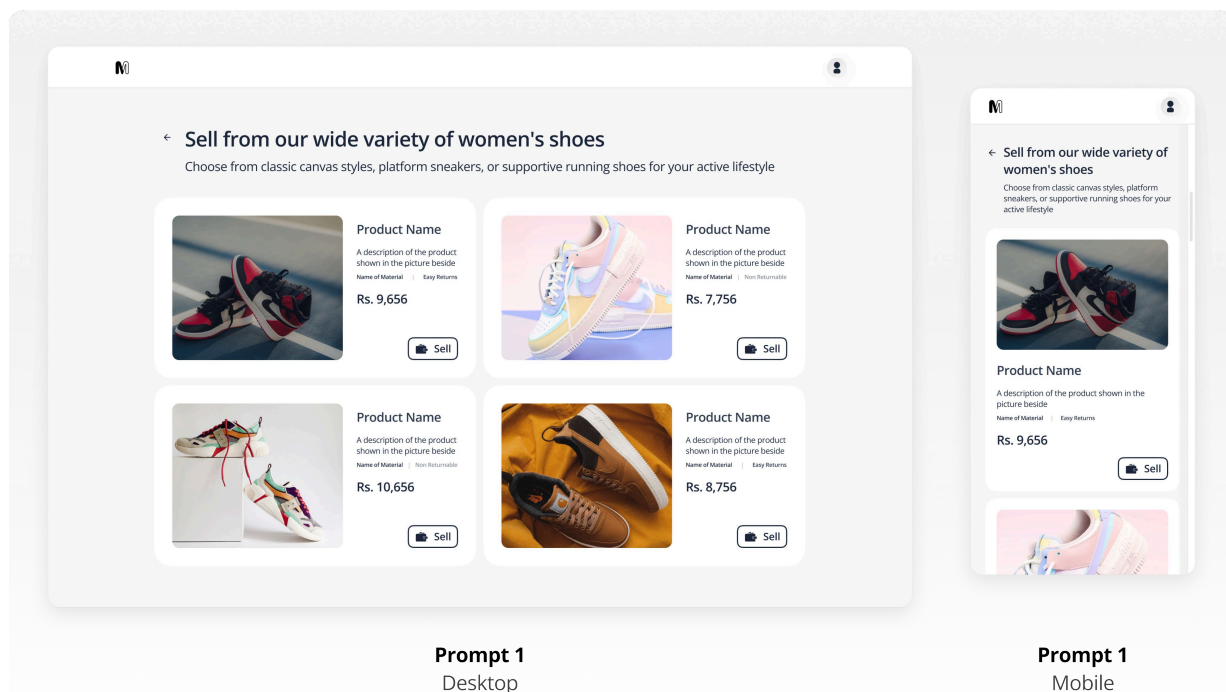


Figure 45. Participant 2's design of Prompt 1 on Desktop and Mobile resolution using Minima Design System

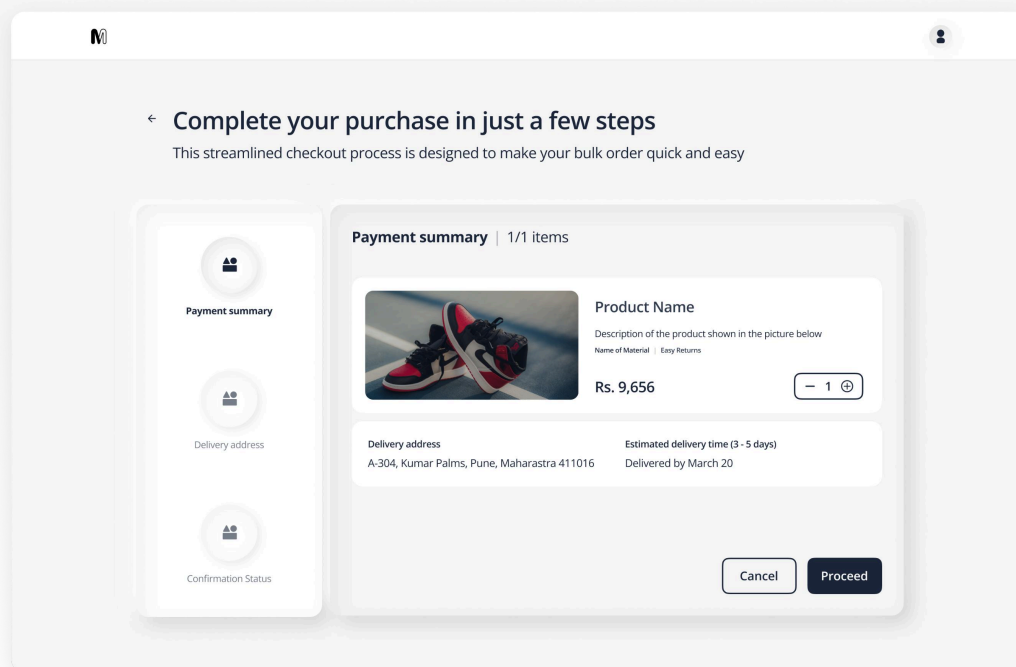
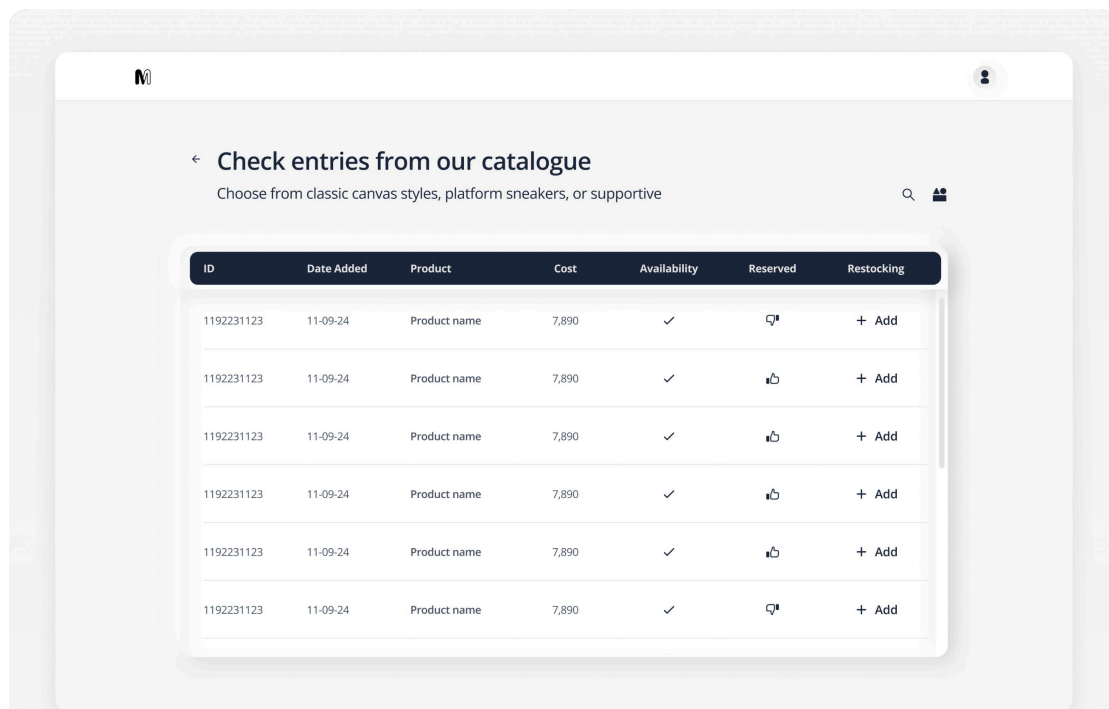


Figure 46. Participant 2's design of Prompt 2 and Prompt 3 using Minima Design System

Participant 3 said that they liked the visual language of the design system and called it clean and minimal. They acknowledged that the Minima framework helped them be more creative while designing the solution, "The predefined layout helped me to quickly decide on the layout structure of the page," they added. They said that they were able to design better pages easily and quickly. They also agreed that it is better than other B2B design systems by stating that this design system's ease of use and flexibility are perfect (Figma, March 14, 2024).

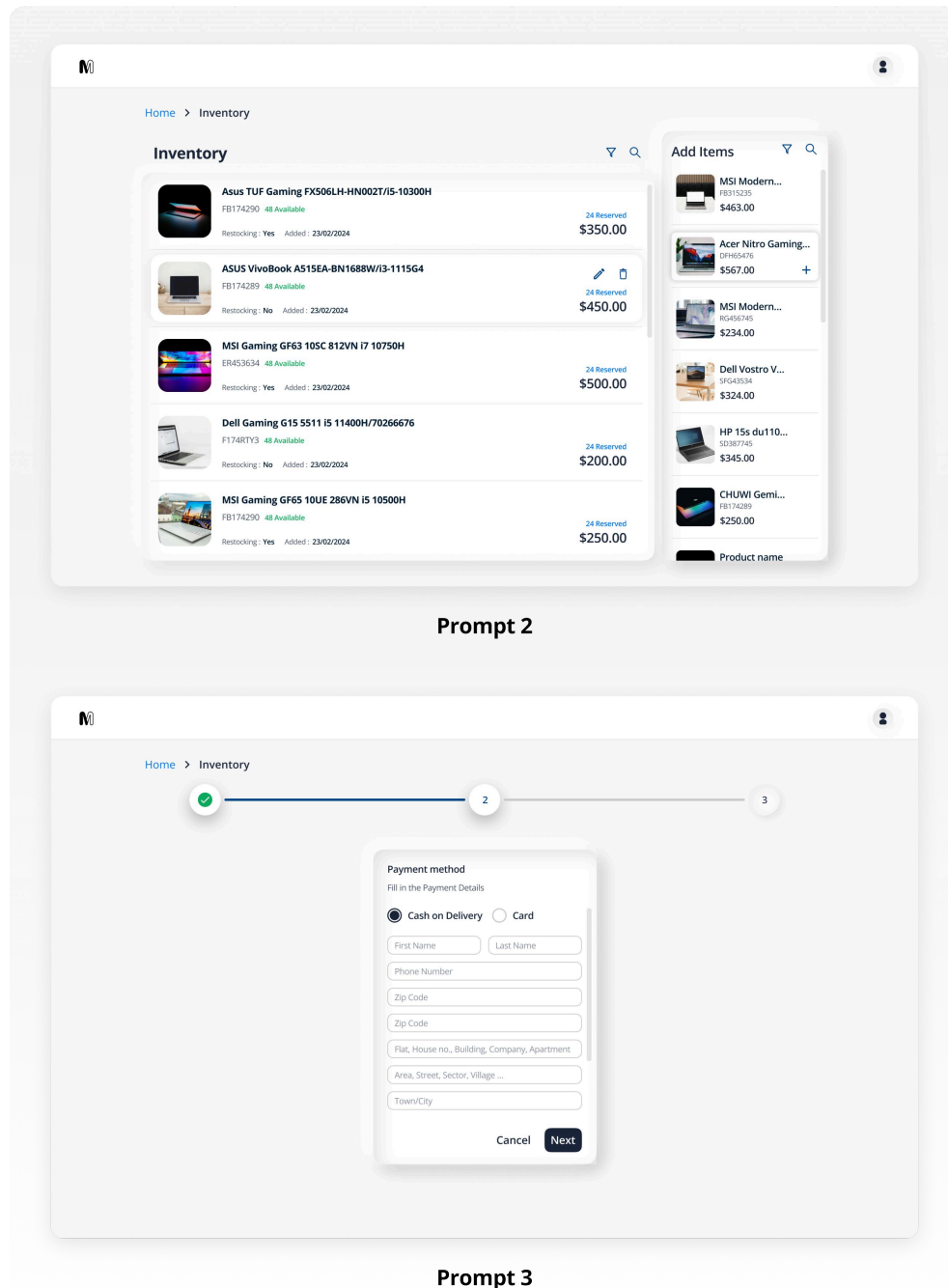


Figure 47. Participant 3's design of Prompt 2 and Prompt 3 using Minima Design System

The difference in the visual design language between the designs of Participants 1, 2, and 3 shows how the Minima Design System enables designers to choose and create distinct solutions. Participant 1 has made an elevated UI design, whereas Participant 2 chose to design using linear elements. Participant 3, contrary to the other two participants, decided to use neomorphic elements.

Critique of Minima

These solutions are in their infancy. I look forward to adding more customization to future versions of Minima Information Architecture. Designers curate Information Architecture according to business requirements, and Minima IA creator should accommodate that well. More customizations will also help designers create it in a certain way to comprehend Information Architecture better.

While predefined UI layouts restrict creativity, it is essential to any B2B design system. In certain use cases, predefined UI layouts lead to less time spent creating solutions, ultimately adding less time and effort to a project. It can add more context for developers concerning industry-standard B2B design systems. It will help speed up the production of the designs created by the designer. Minima Design System has six predefined layouts, which I will add more to future versions for desktop, tablet, and mobile screen resolutions.

Iconography is an essential part of designing interfaces. It adds value to designs and conveys information without using words. Adding more icons to the design system is possible moving forward. Additional details on using elements, components, and layouts will be added to future versions to establish it for new designers and developers using the design system. In future versions, the Minima Design System can incorporate more types of data visualization. While there are some in the design system, it would be beneficial to have more types of data visualizations as they are a crucial aspect of B2B UI design. Designing data visualization is all about representing data in ways that help users avoid risk and make sound business decisions, whether they have 20 seconds or two hours to review the numbers (Dong, 2021).

Conclusion

This study explores the SaaS B2B UX and UI domains. The study began by exploring how to establish better UX and UI design practices while designing business software. The experience of the author, as well as other professional designers, drives this study. It tries to understand the difficulties that designers face while creating these interfaces. The provisional solution to the problems was a two-piece concept of binding UX and UI processes with minimalism, simplicity, and visual aesthetics as core values. The idea was to create interfaces that help its end users afford product goals better by making designers curating these interfaces more creative.

Interviews suggested that most designers face restrictions while designing in the B2B SaaS domain. It may arise due to excess information or dated visual design language. Participatory activity gave us insights into certain essential factors that may influence designers when they design. It helped enrich this study by diving into the raw thoughts of designers about how they like to design. The participatory activities enriched the study in ways that interviews did not. It lets the participants express themselves more freely and creatively. It is worth noting how important that is regarding the study itself.

Minima Information Architecture Creator helps designers create engaging information architectures that help define the hierarchy of elements in an interface. It also helps them place essential information upfront and less critical information elsewhere, reducing cognitive overload for the user. The priority tagging feature in the IA creator achieves this.

Minima Design System is a set of UI guidelines and elements that encourage designers to curate unique and engaging solutions in the B2B space. It has minimal guidelines for the designers to follow. It ensures that designers can design more and follow less. MDS provides designers with UI elements that meet current design standards. It ensures that elements do not feel outdated to the users and fosters delight while using the product.

With this thesis project, my idea was to gauge whether B2B UX and UI space needs simplifying. I have always advocated for simplicity and minimalism. However, that may not mean it is relevant for everything. In my experience, B2B UX and UI design always involve a lot of complex information and functionality. This complexity aggravates when designers use B2B design systems that advocate for complex design solutions. It made me realize that it might be an excellent opportunity to explore the relevance of minimalism in B2B UX and UI design. Participant interviews gave me a great understanding of how simplicity and minimalism might influence the B2B design space for the better. This vision of a design system that enables designers to create creative, engaging, and impactful solutions informed my choices in the research phase. Furthermore, affirming that many designers in the field think on similar tangents guided my choices to curate a design system that enables them to follow less and create more. Maintaining minimalism throughout the design process using Minima requires the disengagement of the user at some point. "Disconnective affordances are the opportunities for disconnection facilitated by the material properties of messaging platforms and mobile devices" (Mannell, 2018). For any design solution to maintain a minimalist approach using Minima, it's possible to imagine future disconnective affordances built into the platform that may allow a limited amount of design choices at each stage of the Minima design process.

A design system is used and referenced by designers and many teams involved in making a product come to life. More details about the interactions of different elements can be laid out in the MDS for developers to comprehend. This study can expand to front-end engineers who can contribute their share of expertise by adding code to the components in the MDS. Building a UI developer library facilitates the design components to come to life on every platform. Product and business teams can also benefit from this study. This study highlights the constraints in the B2B SaaS UX and UI industry. This study highlights provisional solutions, and views on this from a business expert's standpoint will add more authenticity. Including generative artificial intelligence (AI) can further enrich the creation of engaging B2B design solutions and can be explored as an extension of this study.

User testing of the Minima framework reveals that B2B has scope for cohesive, creative, appealing, and functional solutions. The testing also informs how significant simplicity and minimalism are in B2B UX and UI design. The feedback from testing better informs the following steps and possibilities in designing a flexible and future-facing B2B interface.

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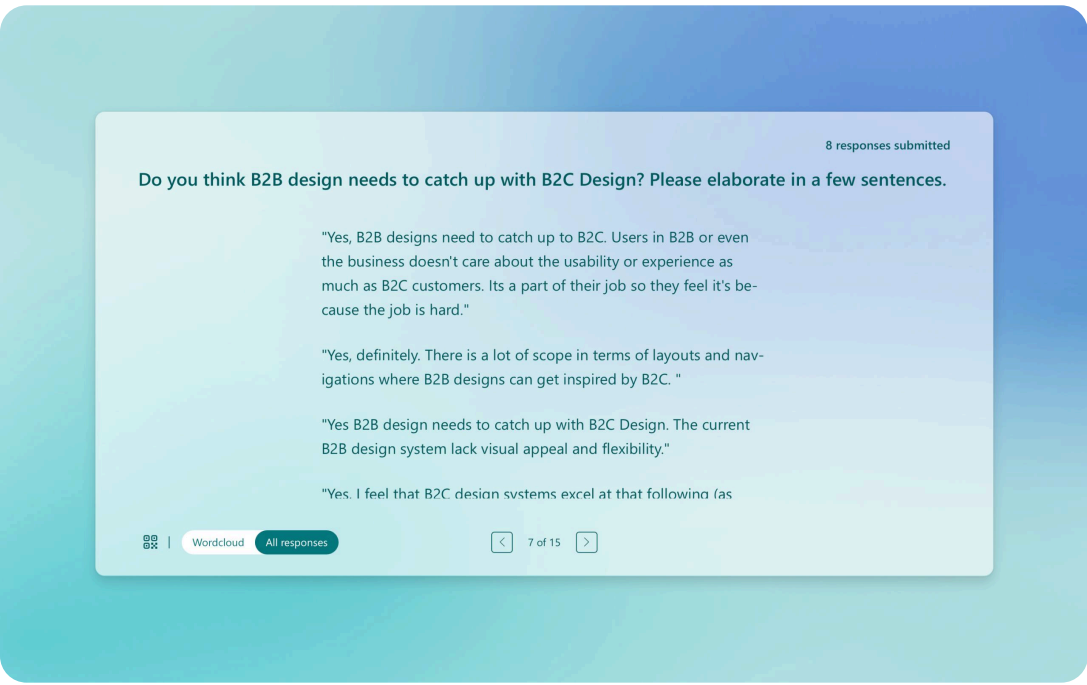
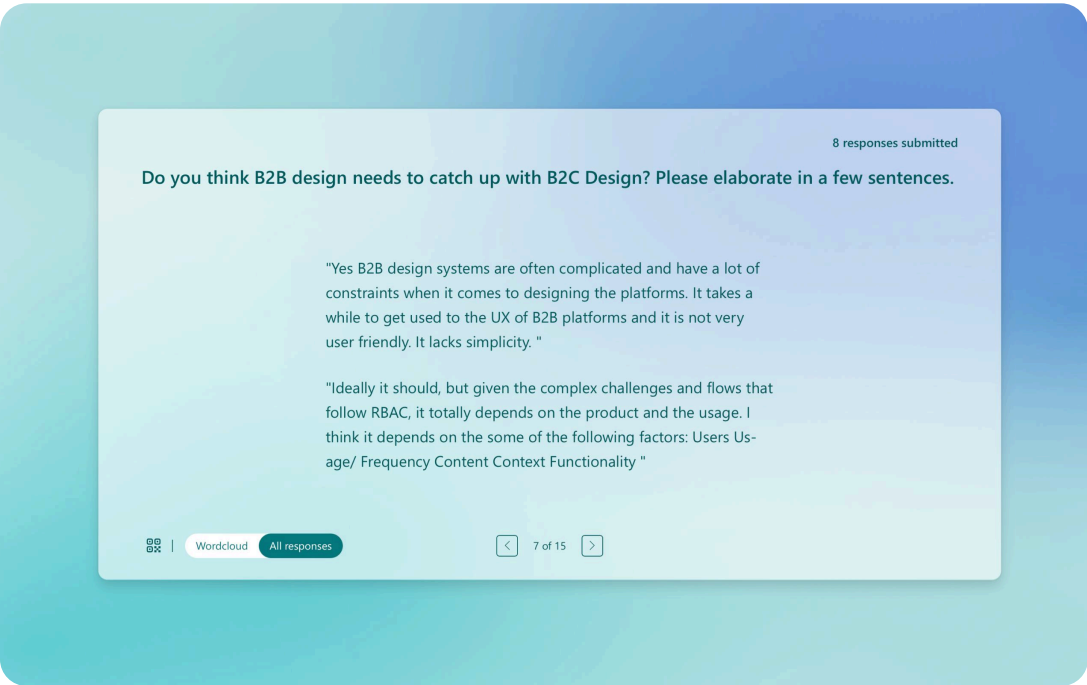
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Appendices

Appendix A: Surveys

Survey of participants on Microsoft Forms.






8 responses submitted

Do you think B2B design needs to catch up with B2C Design? Please elaborate in a few sentences.

"Yes, I feel that B2C design systems excel at that following (as compared to B2B design systems): 1. Emotional engagement in terms of story-telling, which lead to more visual creativity 2. Flexibility in terms of innovation which points at how they explore unconventional design in-order to stand out in a competitive market"

"yes, it is sometimes overwhelming with so many functions. Visually B2C has more contrast and hierarchy which makes it easier for the user to navigate through complex flows. However, its not the same with B2B"

 Wordcloud

All responses

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
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8 responses submitted

Do you think B2B design needs to catch up with B2C Design? Please elaborate in a few sentences.

"Yes, certainly. In a B2B context, it's essential to center the design process around the needs and preferences of the end users. The primary goal should be to create a product or service that genuinely improves the user's experience, making their interactions with the platform smoother, more efficient, and ultimately more satisfying. This user-centric approach ensures that the B2B solution is not just a tool for the company to achieve its objectives, but a valuable resource that enhances the user's workflow or operations. By focusing on the user, businesses can cultivate better engagement, trust, and loyalty, leading to more successful and sustainable B2B relationships."

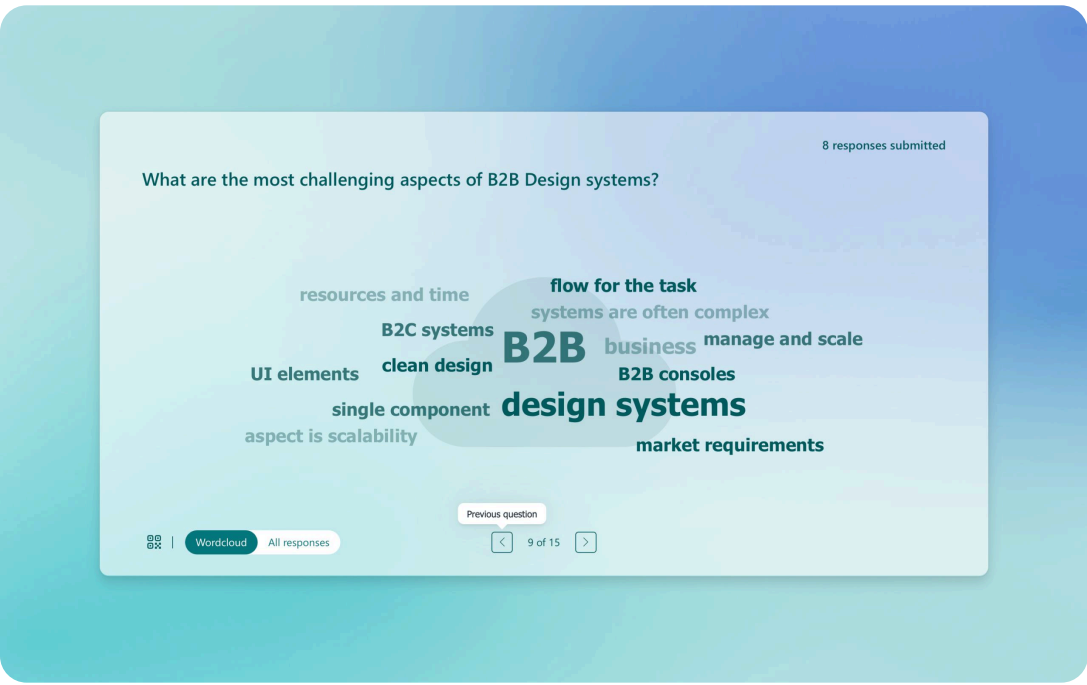
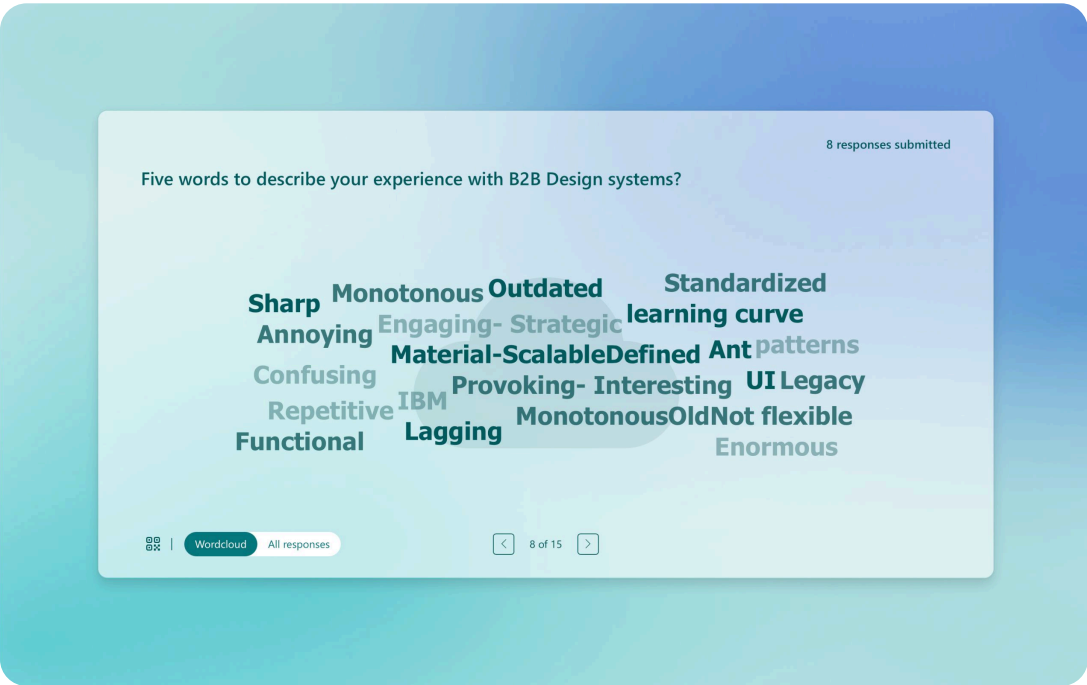
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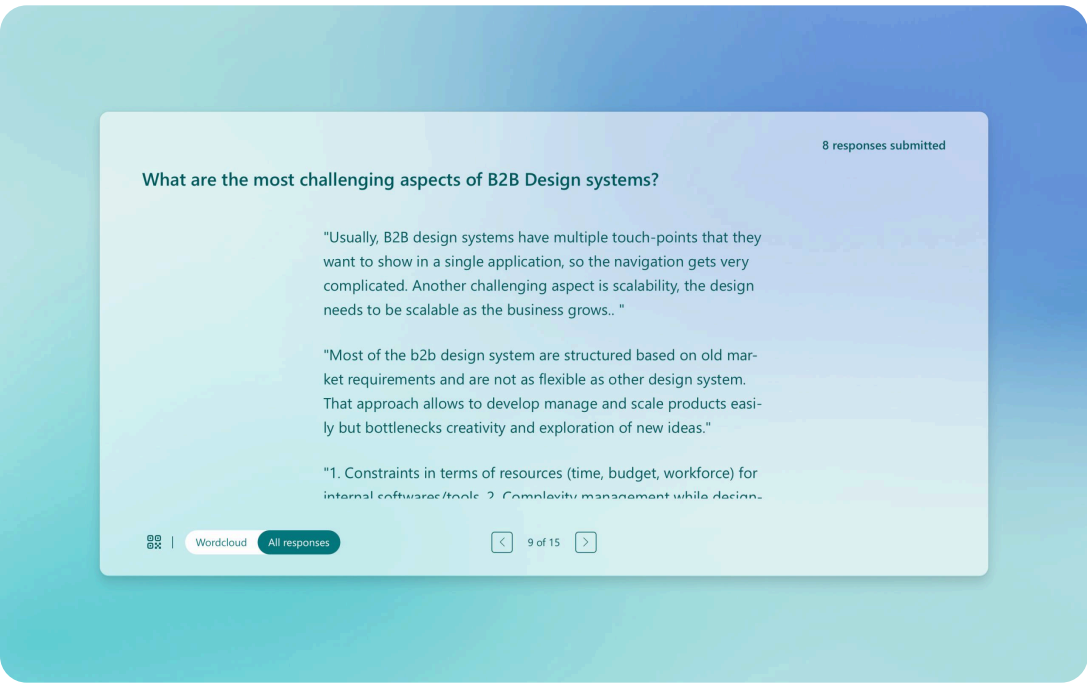
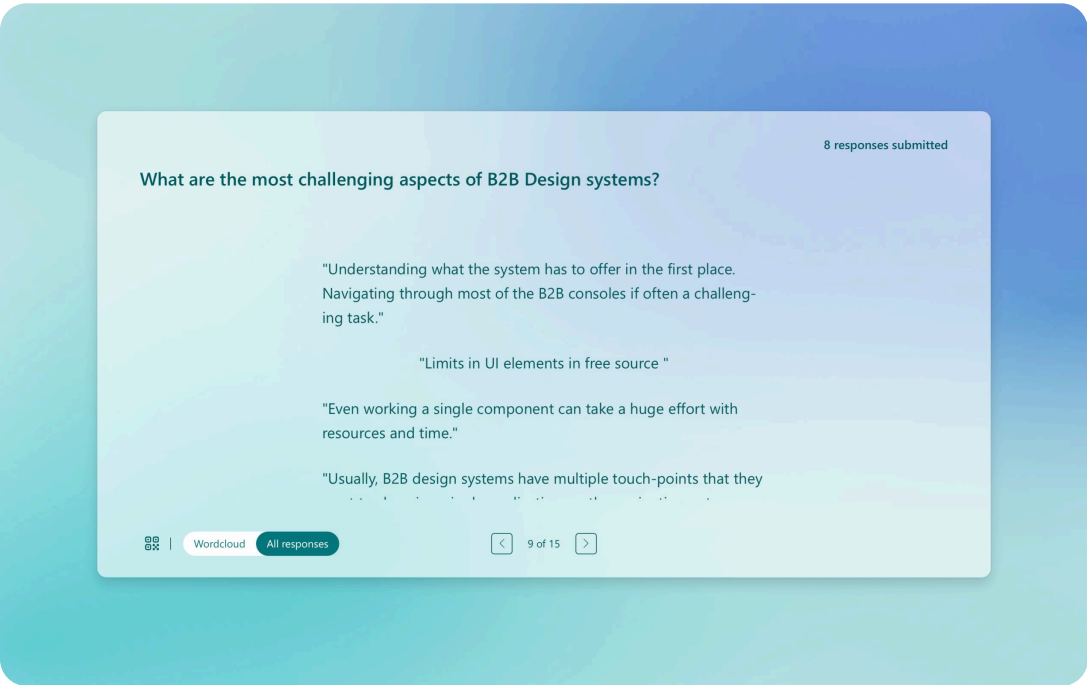
All responses

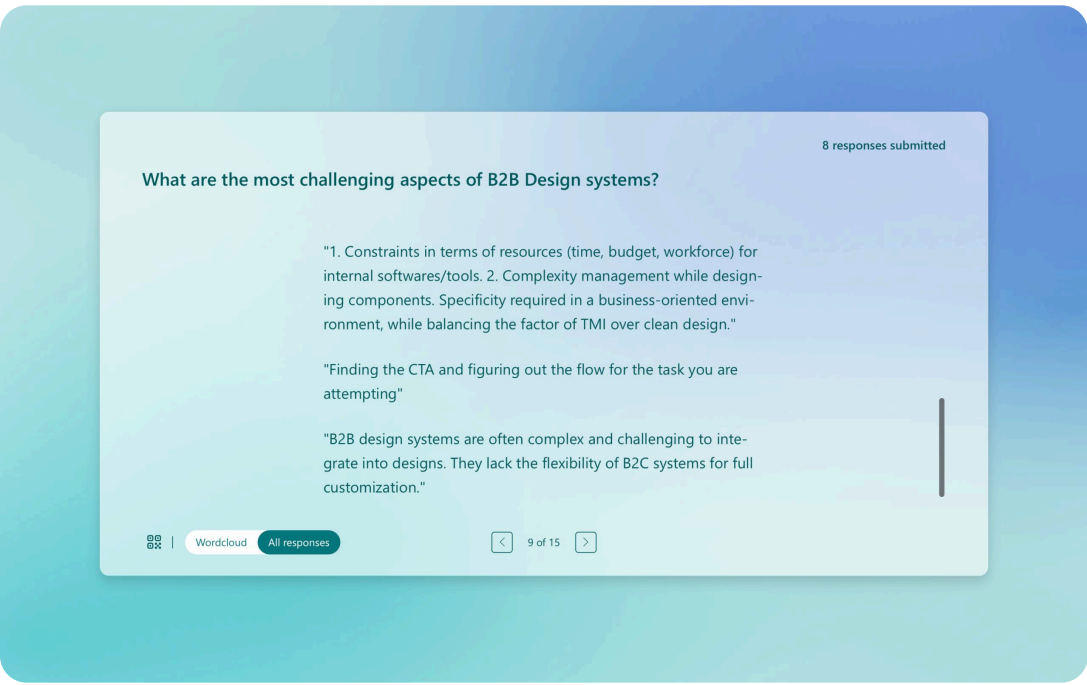
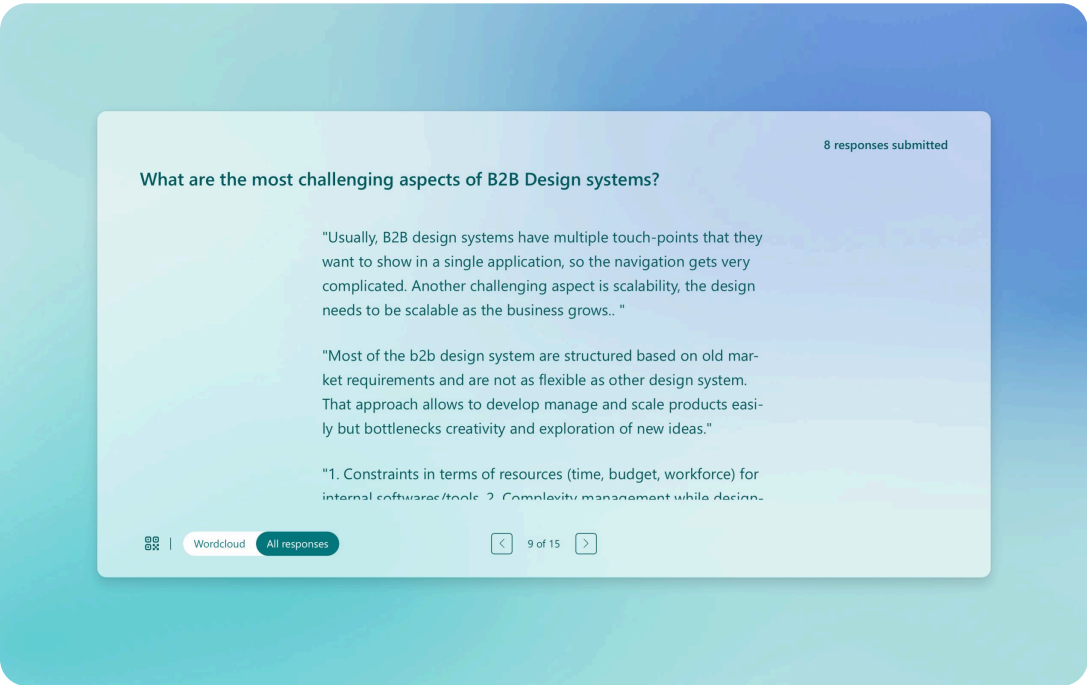
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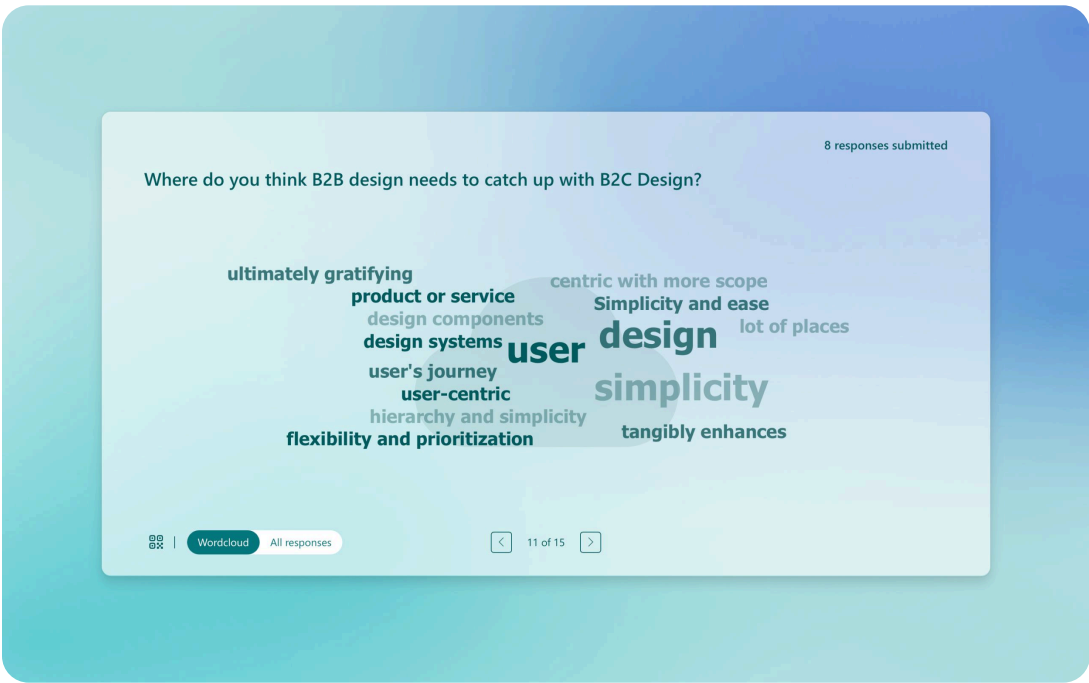
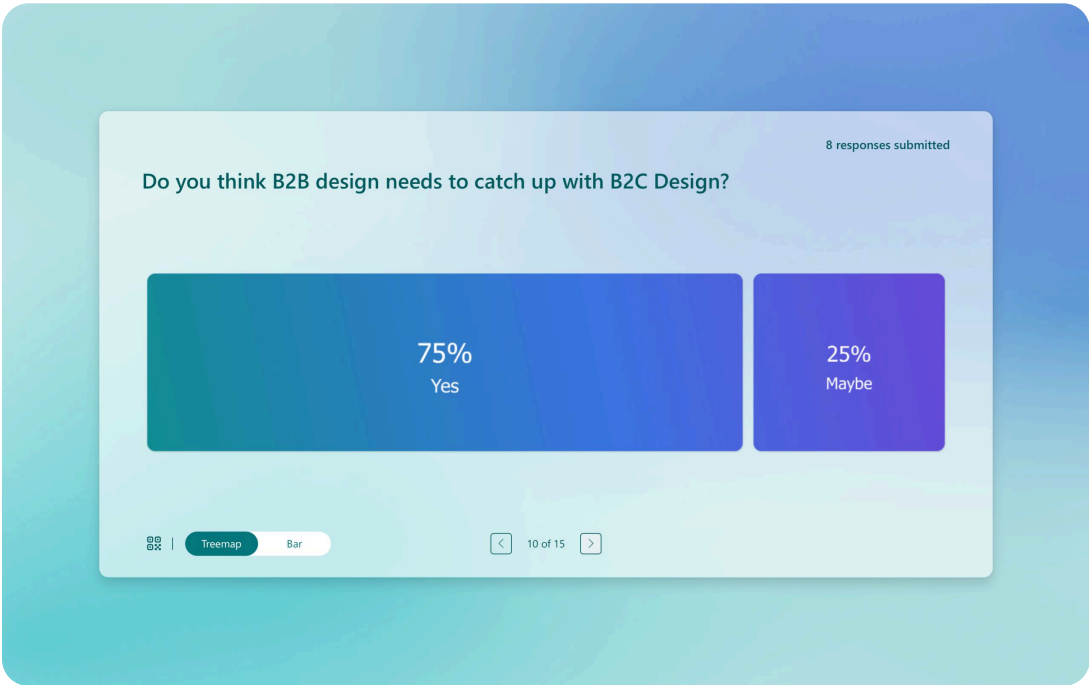
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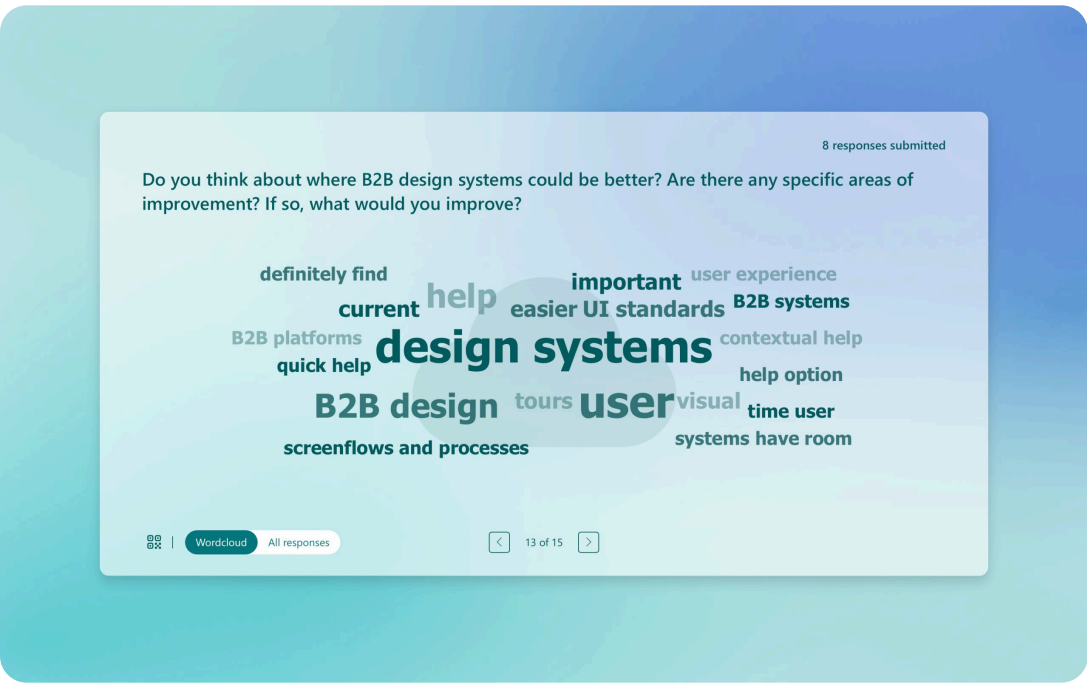
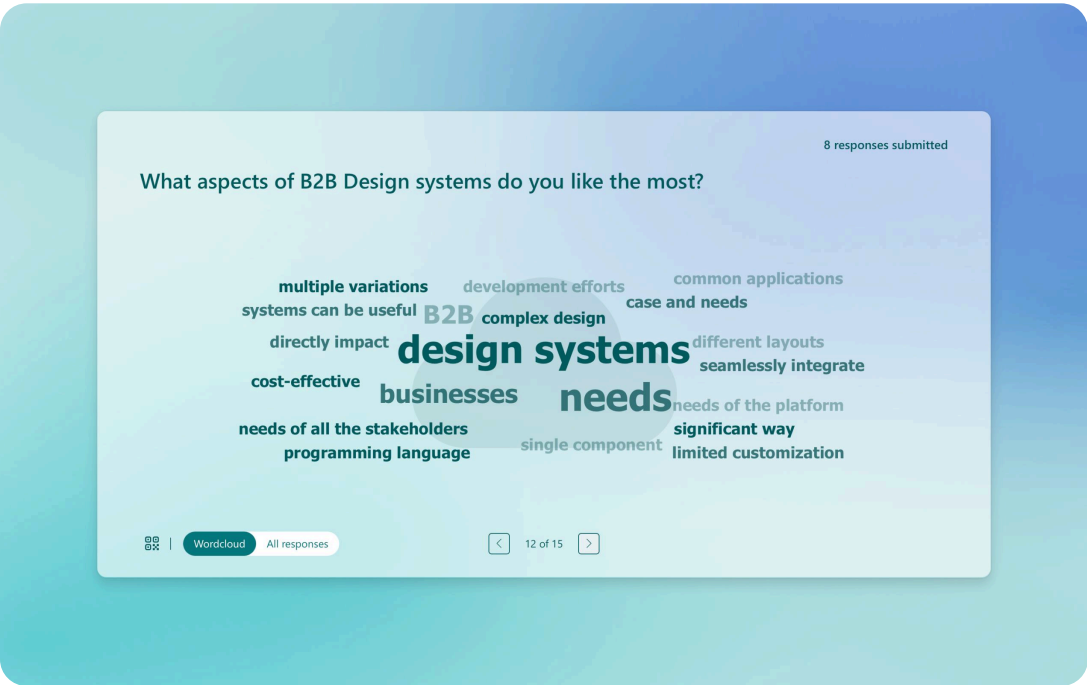
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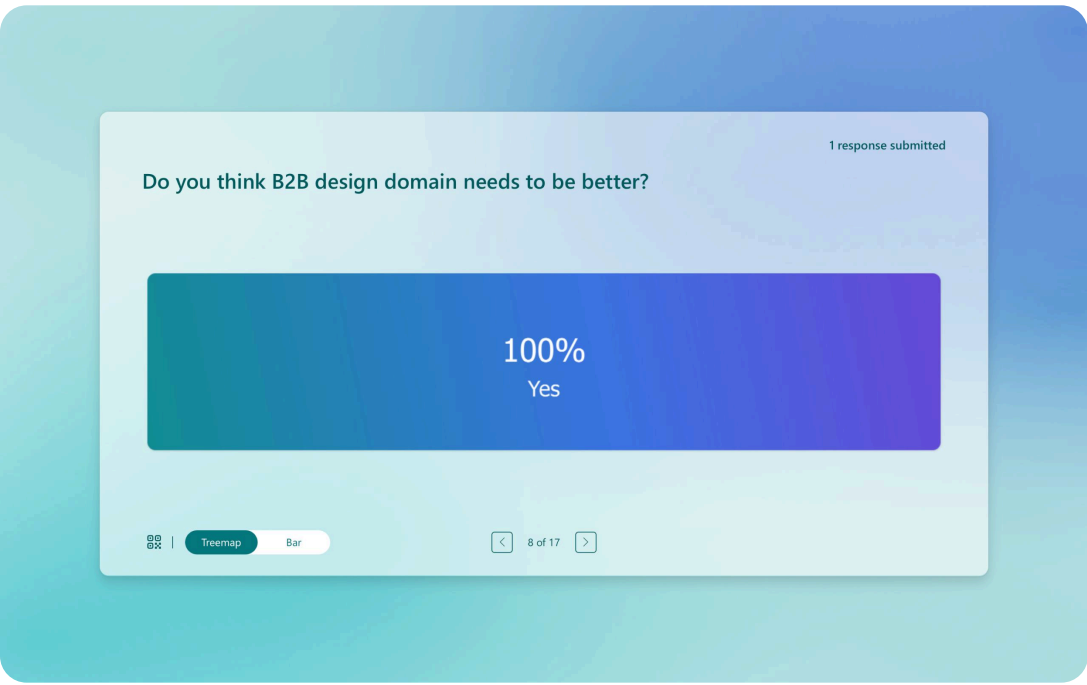
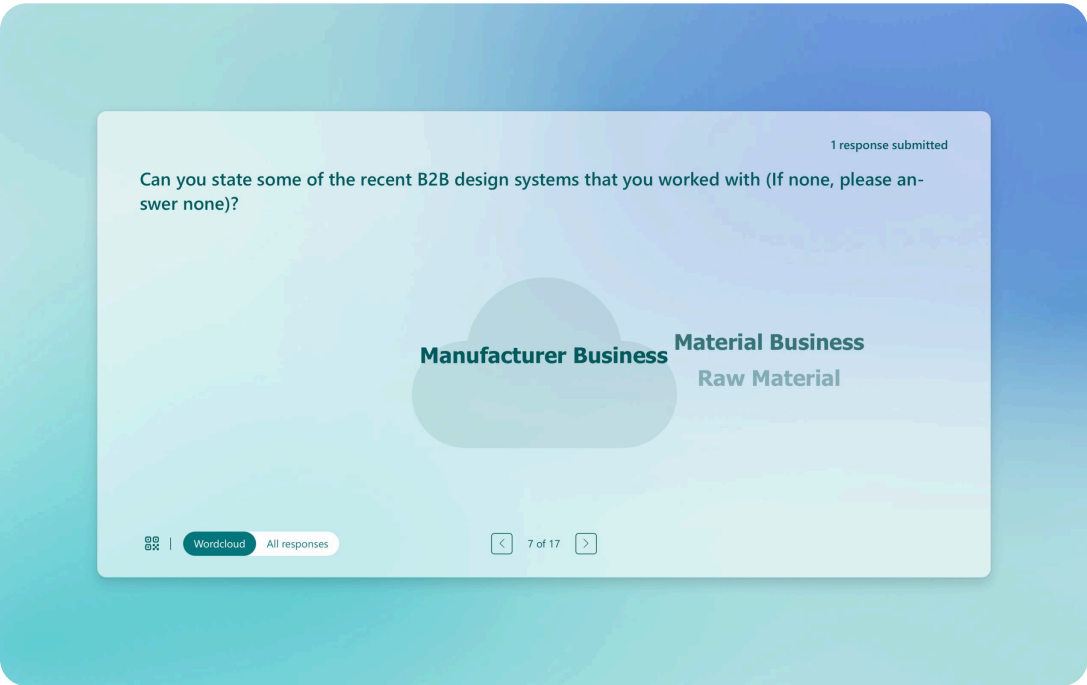


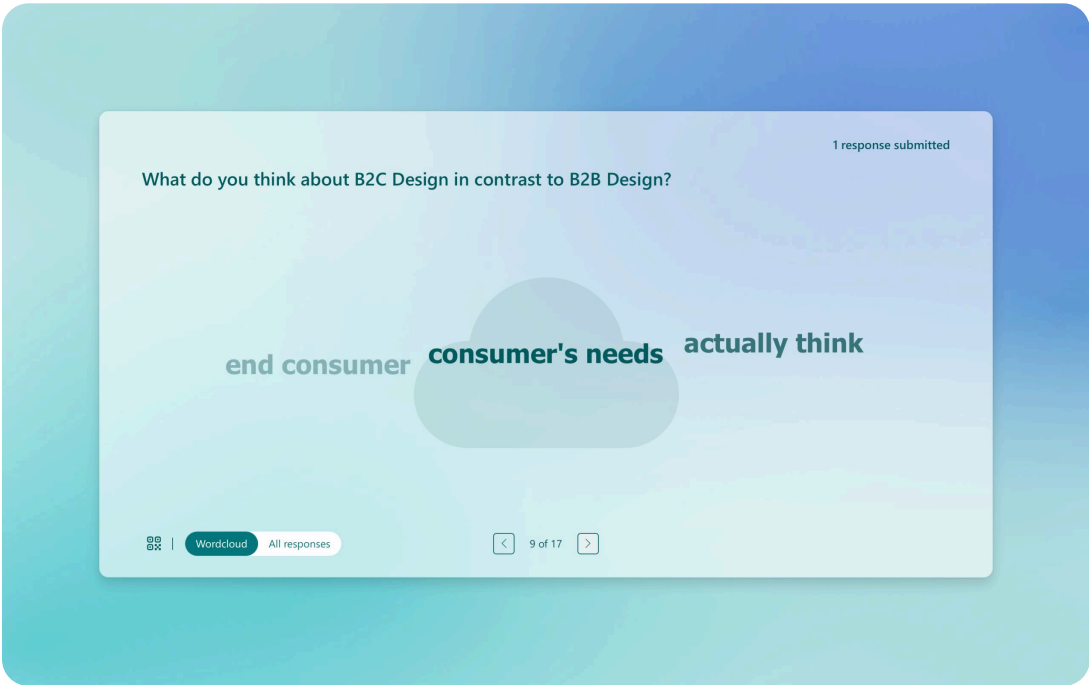


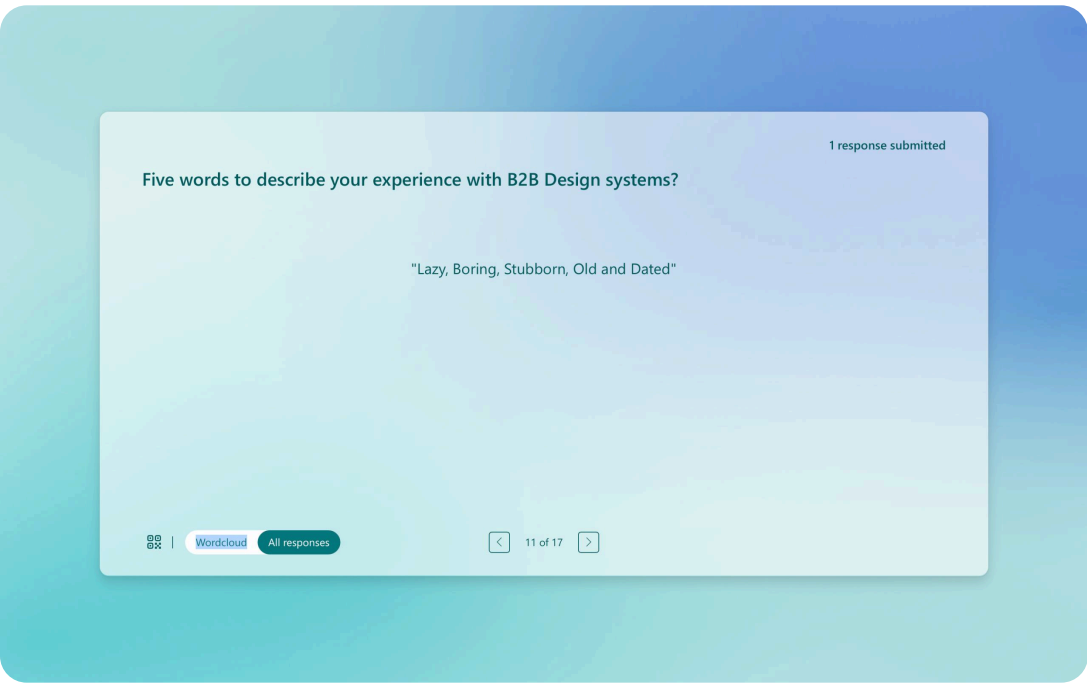
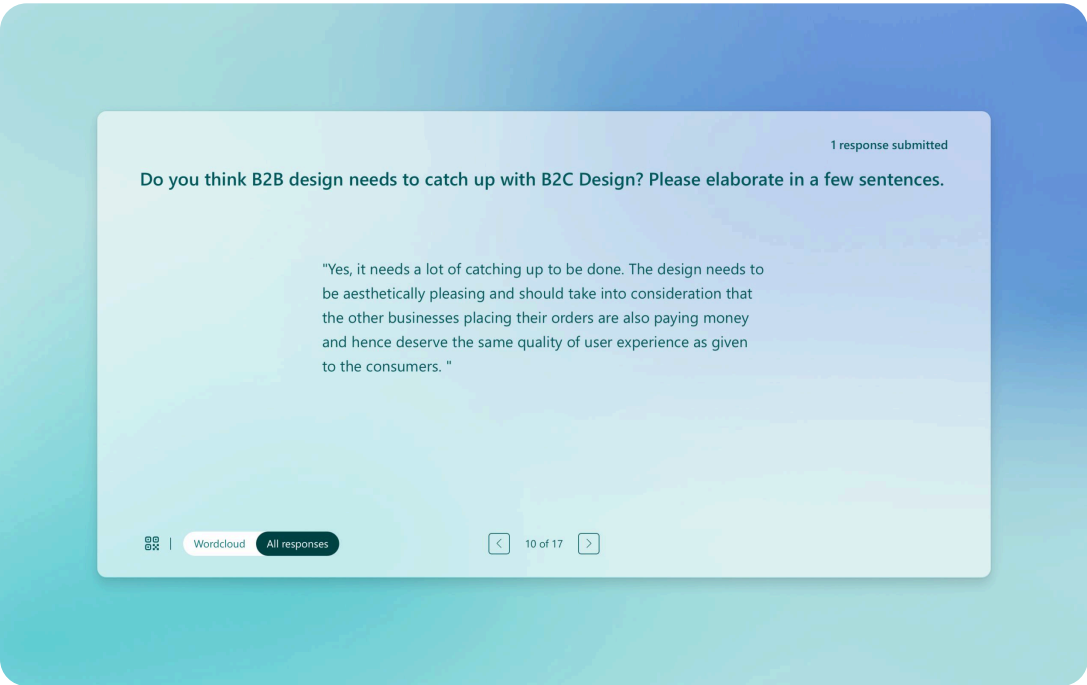




Survey of a participant on another form link with similar questions.







What are the most challenging aspects of B2B Design systems?

1 response submitted

"1. Workflows are rigid and don't take into consideration the needs of different clients. 2. The design is not created for mobile devices. 3. Lack intuitive interfaces 4. User support and training 5. Branding and aesthetics"



Wordcloud

All responses



12 of 17



What aspects of B2B Design systems do you like the most?

1 response submitted

"I like the aspect that majority of the surface level consumers do not know that B2B systems exist and what all is happening in the backend to create/ manufacture the products that they get on B2C e-commerce websites. It almost seems like a secretive organisation functioning smoothly in the dark but has a very important role to play for various businesses to prosper. "



Wordcloud

All responses



13 of 17



1 response submitted

Do you think about where B2B design systems could be better? Are there any specific areas of improvement? If so, what would you improve?

"The process needs to be user centric and the client placing orders should feel that the interface and experience is designed for them. Personalisation plays a major role. Continuous communication is important as well. eg: order tracking, notifications etc. Mobile friendliness is the need of the hour too."

Wordcloud

All responses

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14 of 17

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1 response submitted

What are your thoughts on minimalism in designing interfaces?

"Minimalism is ok as long as all the important aspects and data points are covered and also making sure that nothing is missed at the cost of minimalism."

Wordcloud

All responses

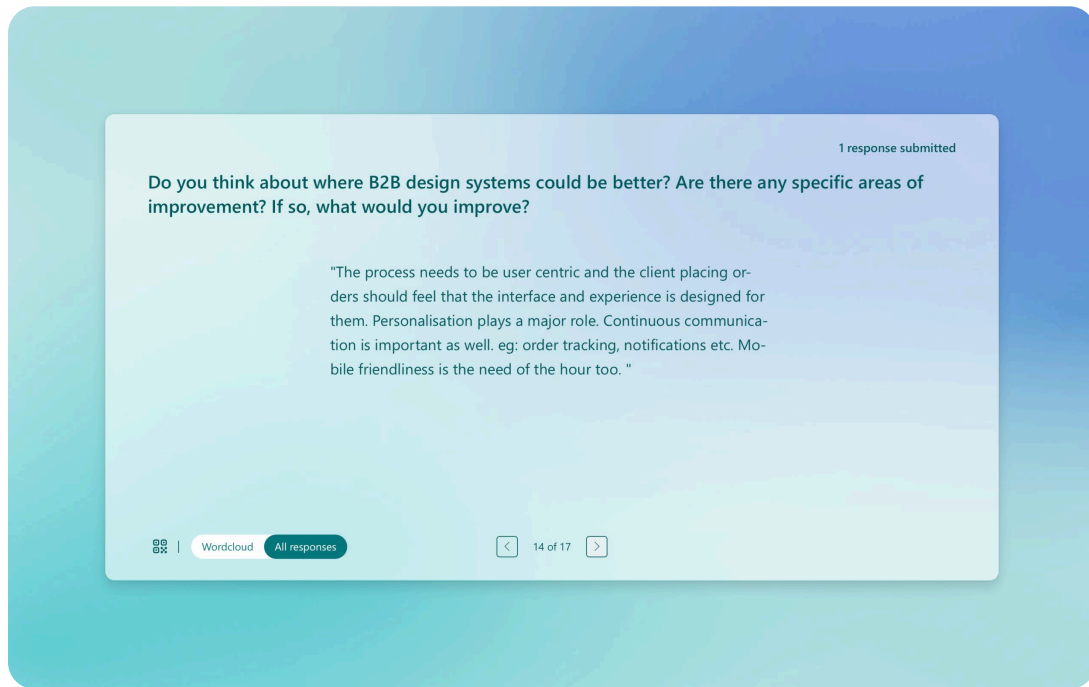
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Appendices

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Appendix B: Interviews

Participant 1 describing their experience working with B2B design systems. So as far as how I have used the design systems, I think that they are trying, they are very repetitive and they are very like they are constant. Every design system that is B2B is very similar to each other. One of the reasons, I think is because they don't think about the end users as consumers who are going to, um, it's basically, if you put it in simple words, the end users cannot do anything about it, they have to use it. So, the people who design these design systems, they really don't care about it. If they're going to happily work with it or they're going to work with it in any other mood. They're just going to make a repetitive system that is easier to generate and they will just put it on so that people can use it and like make designs with it, which I think is very unfair for the people who are actually using it. I think even if you're in the corporate world, you deserve to use the best. You should get the best experience out of it instead of any random experience or anything which is very common. Because the more effective and easy your interface is, the more easier and efficiently you can work.

Like if you take an example of SAP Fiori stencils, there are multiple actions and there are multiple buttons on the screen which really confuses me when I'm trying to design it. So, I cannot imagine how the people who are actually using it might get confused and if it's a clear goal, if I have one button, one action which is straight to the point, easy and like just on the screen, I can definitely understand and it will make my work easier and efficient, like less time, more work is what I mean by that.

Participant 3 giving an overview of B2B UI Design Systems. I don't know if you will go into any B2B design system like Fiori or Salesforce. They lack the functionalities to be creative right. They have predefined different sets of rules that you need to follow for certain types of flows or certain types of a method that we want to target, right?

Let's say you want to do an order task. There's a certain flow decided for that. You cannot modify it as much as you want, so that is what I feel is missing in those design system. You can certainly go out of their bounds and utilise their designs or their like tools or even components to make your own design system from them, but you cannot utilise the technology that they provide for developing the apps and all. So, I feel like there can be some link between both of those where you can easily utilise the pre-build components but have the freedom to utilise them in or designing better interfaces. I would say better looking interface.

Participant 3 describing what they mean by monotonous in B2B design systems.

Monotonous in the sense like there's not enough, I would say colours or even different illustration that we see in B2C designs, right. I feel like that is okay, but still, you can add it in certain places where you can utilise them easily and on the part of easy to use, which is kind of a plus B2B design system that is for beginners who are trying to get into UX design or even someone who's trying to build things for B2B design systems. They have base set that can be easily understand, understandable and easily utilised. So, I feel like pros and cons of both of these. Other than that, I feel there should be a balance, right? As I stated earlier that utilise these both things make one better and make this keep this constant so that it's easier to build things based on older flows. Like not reinvent the wheel but make the wheel look better or modify it a little bit right that way.

Participant 1 discussing guidelines in B2B design systems. If you think about it, I personally think that having rules and restrictions is not a bad thing. Yes, I think we should have that, definitely. But I'm pretty sure, I mean, I'm not sure, what I mean is that as far as I have experienced, I think that because designers think that the outcome, no matter what the outcome is, is it's going to be used by some of the company because they will let their employees use something because that's the only resource that they have is the reason it's not that creative. If we have a little openness in B2B design systems, and if we have more thought into it, I think they can be more creative in spite of having rules and regulations. Because if we remove the rules and regulations, then I think everything will be a mess. It won't, because everything has a base to it and we should have those at least a simple amount of rules and regulations and on top of that a layer of creativity. I'm not saying a lot of creativity because this is a B2B design system which requires some amount of professionalism. So, some amount of creativity, some amount of rules and regulations, and I think it was far more. But yeah, that's what I think. Great.

Participant 1 discussing visual aesthetics in B2B design systems. For instance, if you see SAP Fiori Stencils and then if you see Carbon design system, they're very similar. All the UX and almost all the UI elements, they look very, very, very similar. And that is where my other point comes in, which is monotonous. Everything looks so bland, everything looks so similar and everything, when you place on the screen, even if you place it in a creative way, it still looks very dull.

Participant 6 discussing B2B design systems can be challenging. Working with these systems, on various projects it is quite challenging at first because you are fresh in the industry, you have all the project knowledge that you had done in the college, mostly you did not really consider guidelines during that time, you always had a blue-sky approach. Everything I do would be feasible technically, there wasn't any developer to put constraints on you.

So, during that time in the initial year, using these kinds of systems and guidelines it was very restrictive and the designer usually used to get frustrated as to you can't really think at this time as to how can you solve the use case but not deviate from the guidelines. How can I provide a solution? So, I think when it comes to guidelines, and providing a solution, it is the most challenging thing that a designer has to go through.

Participant 4 on challenges while using B2B design systems. Based on my experience when I was working on B2C products, with respect to navigation, colours, I had the freedom to choose. They had nice and trendy things that I can use. Whereas in B2B I feel with layouts, they have very specific layouts, and you need to like just stick to that. It's very difficult to just go against a certain layout and try something different. So, you do not have that freedom as such. And I think the same goes with colours, I mean it's a B2B thing so It's a thing that you need to be a little professional. So, I just feel the freedom is like something that is compromised. When there are clients who come up and say that you know you need to make it look better, it's very difficult to do that, because you do not have a lot of options to actually make it look better. They (Design systems) are very helpful, and they need to be there. It is not like you should not have design systems. But like you said if that's the case that you even have that creative freedom by still using the design system, it's definitely going to help. I am quite a lot creatively constrained. There are set rule of layouts, or buttons, or any design elements that I need to use so it just makes me feel I am not able to put in my design knowledge to it because I just need to use that.

Participant 1 on Minimalism. I think minimalism is also a core part of how we see products. In today's world, I have seen a lot of companies trying to, a lot of designers trying to make their designs more minimal which is very aesthetic, and which is very simple. I think it should be one of the core values of all the design systems that we have. It really gives us a freedom to make the designs better because I think minimalism has been practised from years, but it did not get that importance till today which I think can really improve B2B design systems in a lot of aspects. Especially if you consider how messed up and how difficult it is to design using a B2B design system. I think if we incorporate minimalism into it, it will be much more easier for designers to design a product and also the product will also be minimal which is perfect for the users and their designers.

Participant 2 on Minimalism. Like I need to know what my necessary details are upfront and what is not really needed should really be toned down. So that sort of would help me maintain balance. I feel like a lot of people have a different have their own definition of the way they think of minimalism. For me, I would say things that are necessary - right up in my face and nothing else that clutters my experience. I would define it as me being able to see the important stuff for the stuff that matters. I think it (minimalism) can be applied in B2B space. I'm not sure if this idea will work for 100%, but right off the bat is maybe the tasks that components do can be prioritised and the low priority functions that are component might have can be hidden under a button or somewhere else. That also helps B2B people do the complex things that they do while keeping minimalism at one of their major principles while making decisions. So, prioritisation of how much should be seen upfront and what gets seen later on and maybe even further can be thought about while designing things in your system.

Participant 1 on visual design in B2B domain. Almost all the UI elements, they look very, very, very similar. And that is where my other point comes in, which is monotonous. Everything looks so bland, everything looks so similar and everything when you place on the screen, even if you place it in a creative way, it still looks very dull. As an employee, if I'm going to work, and if my interface is fresh, I will have a fresh mind. But if I come and I see a dull interface, it will really piss me off. And I wouldn't want to work with the same energy that I had in the morning.

Participant 4's thoughts on visual design in B2B domain. The colours, font styles, I know you need to stick to certain google fonts and all that but anyway the colours, font styles, input fields, there is something that is very basic that is used in B2B and not going beyond that. For B2C we have things like glass-morphism and neomorphism and all those things that have come up. But I feel for B2B we have like a very restrictive mind that we want to stick to these kind of things because it needs to be professional.

Participant 5 on typography and colour. Typography is very important, not really for the UI but for UX designers also to understand how visually the audience the users see or perceive it. And you know how it can actually affect the entire designs, the pages that they look into. And another thing is the colours that you use for the targeted users makes a big impact.

Participant 6 on their visual aesthetic preference. There was one trend glass morphism I really liked that. That has stuck in my mind since, I think, one of the UI designer brought it and I really liked it I hadn't seen such an interface. Looks really different and there is Neomorphism I guess. That is also nice. But I like the overall flat styles of designs, there should not be any shadow or (other things). The thing is when you start adding extra elements to a certain thing, it becomes unnecessary. I mean the use of a gradient for example, shadows, using images. If an icon can solve the problem, why you need an image during that time. SO I think adding more and more to the base, it's kind of annoying for me at least. So flat style, keep it minimal, simple, slightly rounded edges, sharp only when it's required.

Participant 3 on helping users quickly achieve their goals. They (users) are here to complete a particular task. So, finding that right balance of having pleasing app design while letting them complete their task as quick as possible is something that we need to find out.

Participant 4 on excess information, improper hierarchy, and outdated visuals. Scalability with respect to let's say you are using like a certain layout because you have to stick to those layouts and maybe like in my navigation, I want to have let's say seven things but because of the (B2B) design system I need to stick to certain amount of things so I feel scalability is an issue there. I think B2B has so many touchpoints and so many features that they (designers) want to enable that it somehow loses the whole fact that you are not empathising with the users anymore. You just want to put in all those features somehow because it needs to be there. You even need to think about the user.

Participant 6 on how the presentation of UI guidelines matters. You have a design system in place but how you show it to the designers so they can actually use it, that also plays a major role. So if someone is trying to learn, like a trainee, learning material design, so they need to find everything very easily by referring the website that they have and then learn accordingly and learn much faster.

Participant 5's thoughts on accessibility in B2B design. In B2C there is a concept about inclusive design, that is where you include everybody. You make sure it does not matter if they have one limb or it does not matter the disabilities that they have. Like you include everybody. But in B2B that is very rare. Accessibility and inclusivity is very rare.

Participant 6's on accessibility in B2B design. If someone is colour blind, if someone can't really see font sizes, there should be various font sizes available on the designs. They should be customized as per the accessibility part of it.

Participants on what makes them more creative while designing B2B UI.

Participant 4: I think I have said it before but design systems I know I have been cribbing about it throughout, but they are very helpful, they need to be there. If that's the case that you even have that creative freedom while still using the design system, it's definitely going to help. I am quite a lot creatively constrained. I feel that with me being creatively constrained the reason is there are a set of rules of layouts or buttons or any design elements that I need to use. So, it just makes me feel that you know I am not able to put my design knowledge to it because I just need to use that.

Participant 6: Most of the B2B sites have done involve a lot of guidelines and it's really a big restriction I can say. You feel that you are confined in whichever way possible, east, west, north, south, so thinking with all those boundaries is very challenging and you don't feel the creative freedom as you should feel as a designer.

Participant 3: As of now if you go into any B2B design system like SAP Fiori or even salesforce they lack the functionalities to be creative. They have predefined sets of rules that you need to follow for certain types of flows or certain types of methods that you want to target.

Participant 1 on creativity: Personally, I think having rules and restrictions is not a bad thing. Yes, I think we should have that definitely. As far as I have experienced, I think that because designers think that no matter what the outcome is, it's going to be used by some of the company because they will let their employees use something. That's the only resource that they have is the reason it's not that creative. If we have a little openness in B2B design systems, and if we have more thought into it, I think they can be more creative in spite of having rules and regulations. Because if we remove the rules and regulations then I think everything will be a mess because everything has a base to it and we should have those, at least a simple amount of rules and regulations and on top of that a layer of creativity. If I have more freedom, I would love that as a designer because it gives me more area and more space to work and make the product better. If you give designers a particular amount of freedom to be creative in B2B design systems, it will be much more efficient and much more better in terms of UI and UX and I think it's very essential that we start implementing it as soon as possible.

Appendix C: User Testing

Participants on Minima Information Architecture Creator.

Participant 1. Most of the times when there's excessive information or like too much information on something, I definitely go and organize it so that it's clear for me. There are different ways to approach this. I usually go for an information architecture or a user flow when that comes into question or other than that I just create a normal flow of a third person perspective. That definitely gets a little bit tricky, but I try to highlight them manually I would say, like what comes first and what comes later on. I also use colours to highlight them so I can remember it. But yeah, those are the two ways I usually prefer. That is actually a very interesting way of designing. It would definitely make creating user information architecture is much more easier and manageable I would say. And since it eliminates the access steps that come in the process, it will really help me improve the process of creating the information architecture. It also streamlines every action because of that and that is a very good feature of it. I would definitely use this application for creating an IA.

Participant 2. Once I have all the documents in place, I make my own notes out of those, and then I like to organize my information before I start designing my interfaces. I do make information architectures and user flows out of it. I quite like it (Minima Information Architecture Creator). It seems like something new and something that might be useful. I would use this tool to create charts and flows or a hierarchy table for creating my information architecture. I do like the process of making information architectures and screen flows on my own, but I wouldn't mind using this tool so that I can save on time. And yeah, it reduces the time that it would take for me to make this manually so it looks helpful.

Participant 3: One thing which like seems pretty straightforward is like the assignment. So, it becomes easy with the options that we have given, right? So, the priority you can assign what to do and when to do is from the states that you have given right? And other than that the assignment under those states right? That also helps quite a lot because then you can assign subtasks or sub elements of that particular, let's say screen or section of the screen that can be divided and used properly. It makes it simpler. I mean there can be more customizations based on certain types of users, but for a base level to start, it's really nice. Like it's easy to use. Certain companies might have more requirements so that is some customization that can be added later based on requests for stuff like that. I think it will certainly help them reduce the time that they're spending on IAs, which again, let them have more time on thinking about the stuff (designing interfaces).

Participants on Minima Design System.

Participant 1's comments on Minima Design System.

What did I like?

The design system has many possibilities for customisation when designing. Each element has its own feature which can be enhanced further.

It has a very clean and simple visual design. All the components are very minimal as well. It is one of the best minimal design system I have used till date.

The rules for using the design system features are defined very accurately. It is quite easy to implement the designs using the features.

Did it help you be more creative while creating the design solution?

Yes, the design system being customisable is one of the main reasons why designers can be more creative using this design system.

Did it let you design freely?

The design system might seem restrictive at first glance due to being minimal but it actually encourages you to be creative while maintaining the rules. It allows to focus on solving problems effectively, without being overwhelmed by excessive options.

The design system offers a consistent foundation that ensures quality with enough flexibility for creativity and experiments using its defined guidelines.

Did you design better solutions?

Yes, using a Minima helped me design better solutions in more than one way. It made me focus on what's truly important, ensuring the designs are clear, user-friendly, and effective. By removing the unnecessary elements, I could concentrate on improving usability and the overall user experience, leading to more refined and thoughtful solutions.

Did you find it better than other B2B design systems?

Yes Minima is more effective than most B2B Design systems as it is simple and focuses on the essential parts which also helps to streamline the design process. It makes the product designs more intuitive and consistent. This approach reduces the complex nature of B2B designs and helps easier and smoother user experience for users and designers.

What can be improved?

Over all the design system includes most of the features a good B2B design system has. But since it is not a common practice in the B2B world, enhancing the documentation with more examples and best way to use the design system could help new designers and developers adopt the design system more effectively.

Participant 2's comments on Minima Design System.

Great work on the Design system

I wanted to take a moment to express my appreciation for the design system that you've been working on. It's quite clear that you've put a lot of thought and effort into it, and it's already making a big difference.

Here are the few things that I specifically liked:

Clarity and consistency

The way you've ensured that all components have a uniform visual design along with a consistent look and feel is appreciable. It makes everything feel cohesive and user friendly.

Ease of use

The elements and components in Minima are quite easy to use and implement. This is going to save designers a lot of time, ensuring that a uniform standard of design is maintained throughout platforms.

Well documented

The documentation is excellent in terms of clarity, making it concise and easy to understand. As a result the addition of this design system serves as a valuable resource for the designer's (and team's) workflow.

Overall, this design system is quite helpful. It's going to streamline a team's workflow, improve the quality of design and ultimately lead to a better user experience.

What did I like?

- Clarity and consistency
- Efficiency and ease of use
- Sets design standards
- Well-documented resources

Did it help you be more creative while creating the design solution?

Yes, it helped me be more creative in the following ways:

Reduced busywork

By handling repetitive design tasks, the system frees up mental space for designers to explore new ideas and solutions.

Exploration within boundaries while focusing on building user experiences

The system provides a foundation to build upon, allowing designers like us to experiment with layouts and interactions within a consistent framework. It also helps us prioritise the task of addressing the user needs and coming up with innovative solutions over focussing on visual design.

Did it let you design freely?

Design freedom comes from focussing on the specific user problem and using the system's elements creatively to solve it. Which this system allows a designer to focus on, so I'd agree to the flexibility and freedom part.

Did you design better solutions?

Yes, I could design better solutions in terms of:

Usability focus

This system allows me to emphasize usability, encouraging designs that are user-centered and effective.

Shared understanding

Consistency across seen across interfaces designed with this system helps users form a mental model, making it easier to navigate and complete tasks.

Faster iteration

Easy-to-use components from this system allow for quicker design exploration and testing, leading to faster identification of optimal solutions.

Did you find it better than other B2B design systems?

Yes, in terms of these considered factors:

Comprehensiveness

The system cover a good range of B2B design needs.

Ease of use

The system is user-friendly compared to others in terms of component implementation and documentation.

Flexibility

The system allows for customisation and adaptation to different brand identities

Inclusivity and Community support

The inclusion of avatars from various skin tones shows a good approach

What can be improved?

- Missing components
- Documentation gaps

Participant 3's comments on Minima Design System.

What did I like?

The Visual Language used for the design system looks very clean and minimalistic.

Did it help me be more creative?

Yes. The Predefined layouts helped me to quickly decide on the layout structure of the page. And few other elements helped me create the designs faster.

Did it let you design freely?

Yes it did. I was able to understand and use the elements easily.

Did I design better solutions?

Yes. I was able to design better pages easily and quickly.

Did I find it better than other B2B design systems?

Definitely. The ease of use and flexibility is very good in this Design system as compared to other B2B design systems.

What can be improved?

Over the time the once the elements are made into components it will be easier to quickly search, access and modify.

