Website Design Innovation Strategy for Brand XYZ Using the Design Thinking Approach

Haifa Sausan[1], Ellya Zulaikha[2]

[1]School of Interdisciplinary Management and Technology, Institut Teknologi Sepuluh Nopember, Surabaya, East Java, Indonesia
[2]Faculty of Creative Design and Digital Business, Institut Teknologi Sepuluh Nopember, Surabaya, East Java, Indonesia
E-mail: [1*]6032241071@student.its.ac.id, [2]ellya.zulaikha@its.ac.id

(Received: 29 Sep 2025, revised: 14 Oct 2025, accepted: 15 Oct 2025)

Abstract

The rapid growth of e-commerce in Indonesia has transformed consumer behavior and increased expectations for seamless digital shopping experiences. Despite Brand XYZ's popularity on social media and marketplaces, its official website performed poorly due to unintuitive navigation, outdated visuals, and inefficient checkout processes. This study applies the Design Thinking methodology, combined with the American Customer Satisfaction Index (ACSI), to redesign the Brand XYZ website. Qualitative data were gathered through empathy mapping, user journey analysis, and value proposition canvases, while quantitative data were measured using pre-test and post-test ACSI surveys. The SCAMPER method was used during the ideation stage to generate solution concepts, which were translated into prototypes using Figma and tested for usability. Results indicate a substantial improvement in satisfaction, with ACSI scores increasing from 44.42 (pre-test) to 80.53 (post-test). Key gains include simplified navigation, mobile responsiveness, consistent brand identity, and a streamlined three-step checkout. The findings confirm that integrating Design Thinking with ACSI provides a comprehensive framework for addressing usability and brand perception challenges in fashion e-commerce.

Keywords: Design Thinking, American Customer Satisfaction Index (ACSI), Website Redesign, UX, UI, Fashion E-commerce

I. INTRODUCTION

E-commerce in Indonesia has grown rapidly in recent years, reshaping consumer behavior and raising expectations for online shopping experiences. According to Bank Indonesia, national e-commerce transactions showed a significant increase in the period leading up to 2022, reflecting a strong shift toward digital purchasing [1]. In the fashion sector, this trend underscores the importance of delivering seamless and engaging digital experiences. User experience (UX) and user interface (UI) design are central to this effort, as prior studies emphasize that ease of use, intuitive navigation, and visual appeal strongly influence customer satisfaction and loyalty [2], [3].

Brand XYZ, a local fashion label established in 2023, positions itself as a modern brand targeting young urban women. Despite growing popularity through social media and marketplace platforms, approximately 80% of its sales are still generated via Shopee, with relatively low engagement on its official website [4]. Internal data highlight recurring complaints about unintuitive navigation and slow loading times, indicating that the website has not yet delivered an optimal online shopping experience. Given the competitive landscape of digital fashion retail, improving the official website is a strategic necessity to strengthen brand identity and enhance customer loyalty.

Theoretical foundations support the need for website redesign in fashion e-commerce. Norman [5] emphasizes that good design reduces cognitive load and creates effortless interaction. Similarly, Garrett [6] highlights that usability, visual clarity, and functional simplicity directly affect user satisfaction. From a branding perspective, Aaker [7] and Keller [8] stress that consistent brand identity and positive associations are crucial for building brand equity in the fashion industry. Various instruments have also been developed to evaluate website quality, such as WebQual [9], eTailQ [10], and SITEQUAL [11]. Hassan et al. [12] emphasize that usability plays a decisive role in shaping consumer behavior. Consequently, as digital platforms increasingly dominate retail, consumers now demand websites that are fast, responsive, and mobile-friendly [13].

To address these challenges, this study adopts Design Thinking, a human-centered methodology emphasizing user empathy, iterative problem definition, and prototyping [14]. This approach enables the integration of user needs, technological feasibility, and business objectives into website development. Previous studies have demonstrated the effectiveness of Design Thinking in e-commerce redesign projects, particularly in improving usability and customer engagement [15]. Moreover, combining qualitative user research with quantitative measures such as the American Customer Satisfaction Index (ACSI) provides a comprehensive framework for evaluation. ACSI assesses satisfaction through dimensions including expectations, perceived quality, value, and loyalty, offering a robust metric for comparing pre- and post-redesign outcomes [16], [17].

Previous studies further reinforce the importance of integrating user-centered design with satisfaction measurement in digital commerce. Cornelia et al. [15] successfully applied Design Thinking in redesigning beauty e-commerce platforms, while Yulianto et al. [18] demonstrated significant improvements in satisfaction scores following an interface redesign. Similarly, Surya [19] highlighted that layout, navigation, and visual consistency are decisive factors in customer evaluations of fashion websites. These findings underline the relevance of adopting a combined Design Thinking and ACSI framework for evaluating Brand XYZ's digital platform.

II. RESEARCH METHODOLOGY

A. Research Approach

This study employs the Design Thinking framework, emphasizing empathy, creativity, and iterative improvement to address user-centered website redesign [20]. The process integrates five stages—empathize, define, ideate, prototype, and test—with the American Customer Satisfaction Index (ACSI) as a quantitative measure [17]. ACSI was selected instead of WebQual [9], eTailQ [10], or SITEQUAL [11] because it offers a more comprehensive evaluation of satisfaction through dimensions such as expectation, perceived quality, value, and loyalty. Its proven relevance in digital and service contexts enables broader interpretation of post-design user satisfaction [17].

B. Data Sources and Collection

Primary data were obtained through semi-structured online interviews and ACSI-based surveys of loyal customers who had spent at least IDR 3,500,000 in one year. Secondary data were collected from academic literature, industry reports, and internal company documents. Interviews explored user experience with navigation, layout, and checkout, while the ACSI instrument measured expectations, perceived quality, perceived value, satisfaction, and loyalty [17], [21], [22].

C. Research Setting and Duration

A mixed-method approach was employed. Thematic coding identified user personas and pain points, while quantitative ACSI scores allowed comparison before and after the redesign. Scores from Likert-scale responses (1–5) were converted to a 0–100 range using Equation 1:

$$ACSI = \frac{(\bar{x} - 1)}{4} \times 100 \quad (1)$$

where:

- $\bar{x}$ = mean score from user responses,
- 1 = minimum possible Likert score,
- 4 = range between maximum (5) and minimum (1),
- Multiplication by 100 transforms the score into a 0–100 index.

The categorical thresholds used in this study—low (0–50), moderate (51–75), and high (76–100)—were adapted for interpretive clarity, following common satisfaction index practices in service evaluation studies [17], [22]. This classification aims to simplify interpretation rather than represent statistical segmentation.

III. RESULTS AND DISCUSSION

A. Overview of Implementation

The redesign of Brand XYZ's website followed the structured stages of Design Thinking, beginning with empathize and concluding with test. Each stage contributed insights that guided the transformation of the platform from its earlier form—criticized for unintuitive navigation, inconsistent visuals, and a complex checkout process—into a website tailored to improve usability, responsiveness, and customer satisfaction [14], [17]. The integration of the American Customer Satisfaction Index (ACSI) allowed both qualitative perceptions and quantitative satisfaction levels to be systematically measured [9], [21], [23].

B. Respondent Characteristics

Respondents were selected through purposive sampling, ensuring they were loyal customers who had spent at least IDR 3,500,000 annually on the Brand XYZ website. This ensured participants had sufficient experience to evaluate the platform [10], [16].

Table 1. Characteristics of Respondents

Name	Age	Job	City	Transactions & Spending (IDR)
Sari	32	Private Employee	Jakarta	5 trans / 3,825,000
Dina	28	Consultant	Jakarta	6 trans / 4,275,000
Rika	26	BUMN Employee	Bandung	4 trans / 3,640,000
Lestari	35	Architect	Yogyakarta	3 trans / 3,515,000
Maya	29	Content Creator	Aceh	9 trans / 7,625,000

As shown in Table 1, respondents represented active consumers with diverse professional backgrounds and cities across Indonesia. The majority expressed dissatisfaction with the website, citing issues such as difficult navigation, outdated design, and transaction inefficiencies. Many compared the official site unfavorably to Shopee, which they considered more usable and trustworthy [11], [18].

C. Empathize Stage: Understanding User Pain Points

The empathize stage captured user experiences with the old Brand XYZ website. Empathy maps were created to show what respondents said, thought, felt, and did [13], [20]. Five personas were identified: Sari (Practical Stylist Shopper), valuing efficient browsing; Dina (Time-Saving Professional Shopper), focused on fast transactions; Rika (Budget-Conscious Formal Shopper), seeking practicality and mobile ease; Lestari (Detail-Oriented Professional Shopper), attentive to design harmony; and Maya (Trend-Driven Content Shopper), driven by aesthetics and credibility. These personas guided the redesign process.

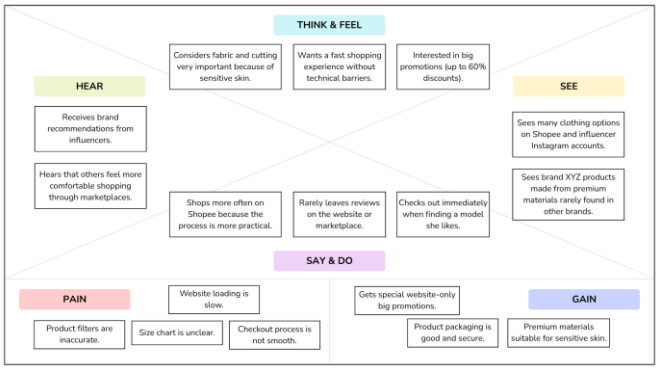


Figure 1. Empathy Map of Sari

Sari, a 32-year-old private employee, felt frustrated by confusing categories and slow page loading (Figure 1). She often abandoned carts, doubting the site's professionalism. This reflects issues in navigation and system performance.

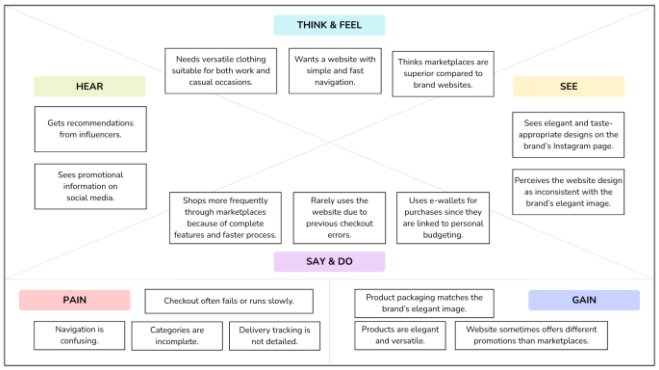


Figure 2. Empathy Map of Dina

Dina, a consultant, criticized the lengthy checkout process and lack of e-wallet options, which made her redirect purchases to Shopee (Figure 2). This highlights how inefficient transactions reduce loyalty [18], [19].

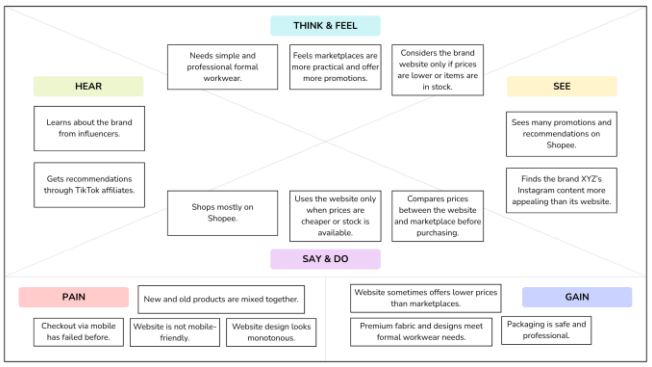


Figure 3. Empathy Map of Rika

Rika, a 26-year-old state-owned enterprise employee, shopped primarily via mobile (Figure 3). She described the mobile layout as broken and disappointing compared to Shopee. This reflects the risks of neglecting responsive design in mobile-dominated markets [11], [13].

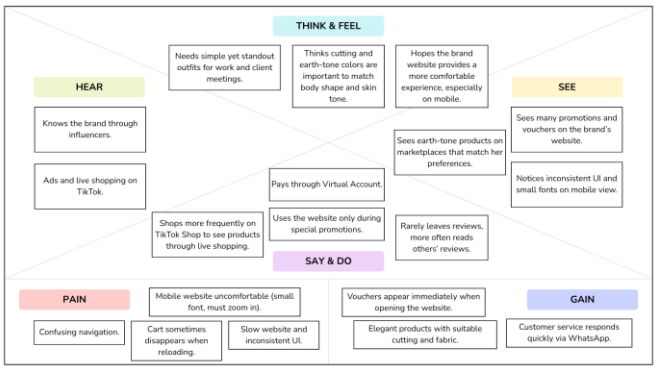


Figure 4. Empathy Map of Lestari

Lestari, an architect, focused on aesthetics (Figure 4). She described outdated typography and colors as inconsistent with the brand's Instagram presence. This weakened her perception of Brand XYZ's premium identity [7], [8].

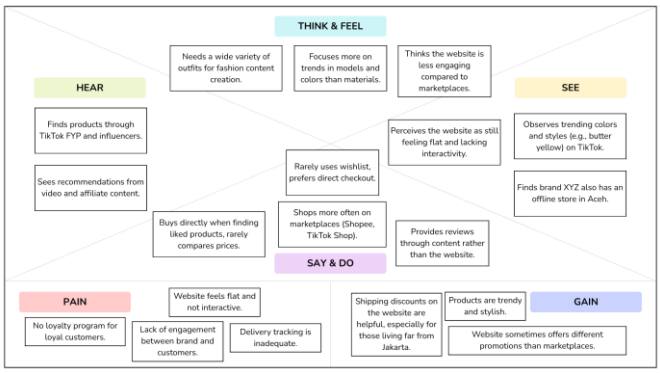


Figure 5. Empathy Map of Maya

Maya, a content creator, linked outdated visuals with reputational risk (Figure 5). She admitted she was embarrassed to recommend the site to her audience, instead promoting Instagram. This demonstrates how digital credibility affects influencer-driven marketing [12], [15].

D. Pre-Test ACSI Results

After the empathy maps were constructed, the American Customer Satisfaction Index (ACSI) was applied to measure customer satisfaction with the old Brand XYZ website. The ACSI consists of five dimensions: customer expectations, perceived quality, perceived value, overall satisfaction, and loyalty. Scores were calculated using a five-point Likert scale, then converted into a 0–100 index.

Table 2. Pre-Test ACSI Score

Dimension	Mean ($\bar{x}$)	ACSI Conversion	Category
Customer Expectations	2.666	41.65	Low
Perceived Quality	2.502	37.55	Low
Perceived Value	2.816	45.4	Low
Customer Satisfaction	3	50	Low
Customer Loyalty	2.9	47.5	Low
Overall	**2.7768**	**44.42**	**Low**

As shown in Table 2, the overall pre-test ACSI score was 44.42, placing the website in the low satisfaction category. The lowest score was perceived quality (37.55), reflecting problems with usability and performance. Customer loyalty (47.50) was also weak, showing hesitation to repurchase. Customer expectations (41.65) and perceived value (45.40) were likewise in the low category, while customer satisfaction (50.00), although at the threshold of moderate, is classified as low according to this study's categorization. These results, consistent with the empathy maps, highlight frustrations with outdated design, slow performance, and inefficient navigation, confirming prior findings that poor usability leads to lower satisfaction and loyalty [5], [10], [11].

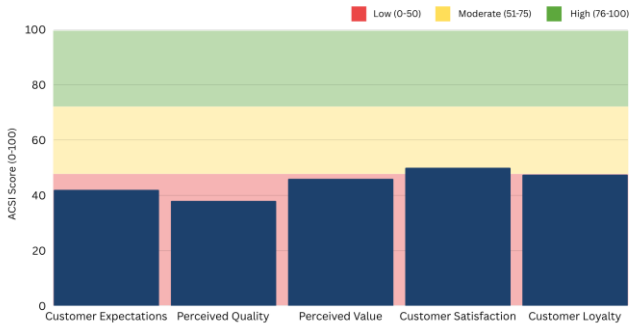


Figure 6. ACSI Pre-Test Result Visualization

Figure 6 further illustrates that the largest gap occurred in perceived quality, consistently rated low due to slow performance, confusing navigation, and weak visual design. This supports Norman's theory [5] that usability is a prerequisite for positive emotional experiences. Likewise, low perceived value highlights inefficiencies in the checkout process, aligning with previous research emphasizing the importance of smooth and seamless transactions in e-commerce [2], [18]. Taken together, the empathy maps and ACSI pre-test results provided both qualitative and quantitative evidence of user dissatisfaction. This convergence of findings not only confirmed earlier research linking poor usability to low loyalty and satisfaction [24], but also strongly justified the need for a redesign to guide the subsequent stages of the Design Thinking process.

E. User Journey

The user journey maps provided a step-by-step visualization of how respondents interacted with the old Brand XYZ website. Each journey traced the stages of awareness, browsing, selection, checkout, payment, and post-purchase. By mapping these experiences, it became possible to identify specific pain points that prevented customers from completing their transactions.

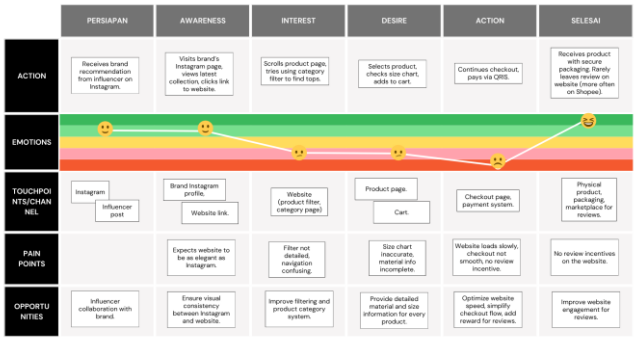


Figure 7. User Journey Map of Sari

Sari's journey typically began during her office lunch break, when she sought to browse quickly and efficiently. The map in Figure 7 shows that she encountered frustration at the browsing stage due to the unclear categorization of products. This difficulty carried into the selection stage, where small product images limited her ability to evaluate items. At checkout, slow loading times disrupted the process, resulting in repeated cart abandonment. Her journey reveals how friction at multiple stages eroded her motivation to use the website.

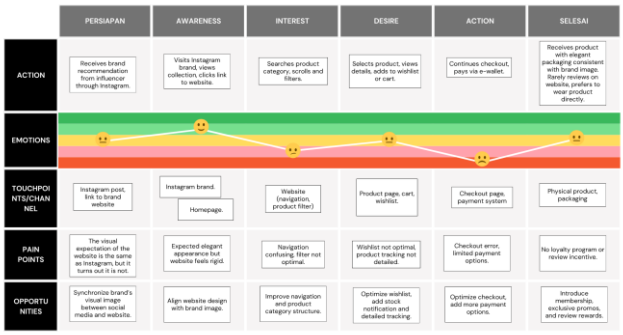


Figure 8. User Journey Map of Dina

Dina's journey was dominated by her concern for efficiency. She could navigate the browsing and selection

stages without much difficulty, but the checkout stage represented a critical breakdown. The lengthy process, compounded by the absence of e-wallet options, made her feel that the transaction demanded more effort than it should. The map in Figure 8 illustrates how one weak stage in the journey—the payment process—undermined an otherwise acceptable experience.

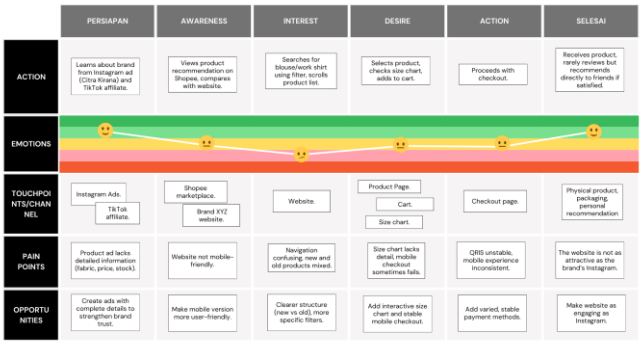


Figure 9. User Journey Map of Rika

For Rika, who primarily accessed the site through her smartphone, the browsing stage immediately presented obstacles. The map in Figure 9 highlights that the mobile layout appeared misaligned, with overlapping menus and poor visibility. This issue persisted through product selection, where images and text were poorly formatted for smaller screens. By the checkout stage, she often abandoned her attempts altogether. Her journey underscores the risks of neglecting mobile optimization in a market where most e-commerce traffic originates from smartphones.

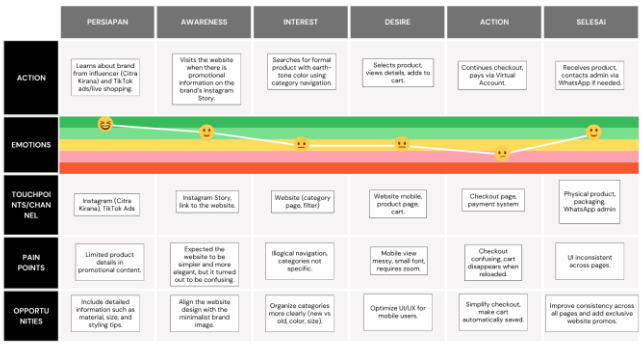


Figure 10. User Journey Map of Lestari

Lestari's journey shows that her dissatisfaction stemmed less from functionality and more from aesthetics. She was able to browse and select products, but the outdated color scheme and inconsistent typography left her unconvinced of the brand's professionalism. This perception weakened her motivation to proceed to checkout. The map in Figure 10 illustrates how poor design consistency affected her evaluation of the entire digital shopping experience.

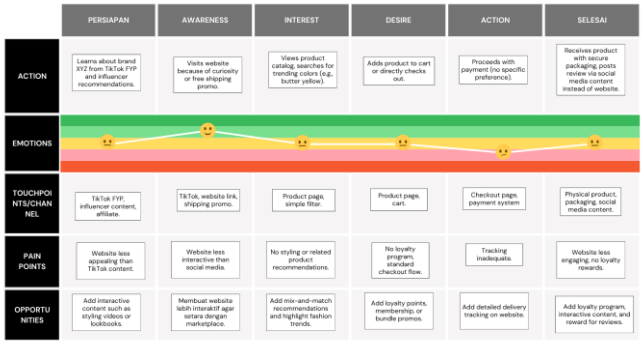


Figure 11. User Journey Map of Maya

Maya, as a content creator, approached the journey not only as a shopper but also as someone concerned with digital image. She reported embarrassment at the outdated visuals during browsing and selection, and this negative impression persisted throughout the checkout stage. The map in Figure 11 reveals that her dissatisfaction extended into the post-purchase stage, where she refused to recommend the website to her followers. This demonstrates how weak design can harm not only individual satisfaction but also word-of-mouth reputation.

F. Define Stage: Identifying Core Problems

Based on the empathize stage, the define phase consolidated user feedback into problem statements that guided the redesign. Three core issues were identified: (1) inefficient navigation, where unclear categorization made products difficult to find; (2) weak visual identity, as the brown-dominated design failed to reflect the brand's intended image; and (3) complicated checkout, with lengthy and confusing payment steps often leading to cart abandonment. These problem statements were reframed into "How might we…" questions—such as *How might we simplify product navigation for faster access?* and *How might we design a checkout flow that reduces transaction abandonment?*—to establish a user-centered foundation for ideation [23].

To further align user needs with redesign features, the Value Proposition Canvas (VPC) was applied. The VPC connects customer profiles (jobs, pains, and gains) with a value map (products and services, pain relievers, and gain creators), enabling the assessment of fit between user expectations and proposed solutions [25].

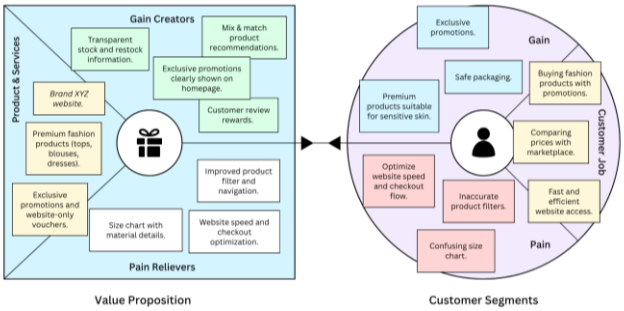


Figure 12. VPC of Sari

Sari's profile highlighted her primary job as browsing quickly during limited time breaks. Her pains included confusing product categories and slow page loading, while her gains involved an efficient and seamless experience. On the value map in Figure 12, the introduction of a mega menu navigation and improved website performance directly relieved her pains. At the same time, faster access to products created the gains she expected. This canvas illustrates how structural changes in navigation design can deliver immediate improvements for time-constrained users.

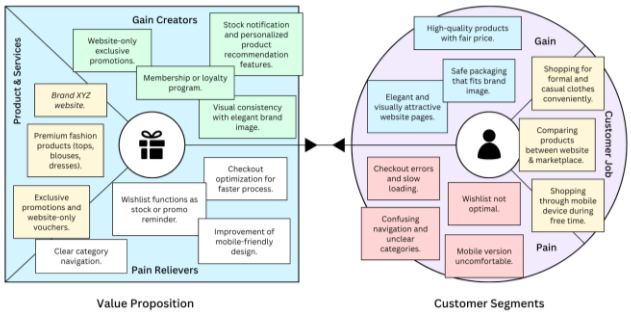


Figure 13. VPC of Dina

Dina's canvas emphasized her focus on completing transactions efficiently. Her pains centered on the lengthy checkout process and the absence of popular digital payments, while her gains included speed and convenience. The value map in Figure 13 addressed these issues with a three-step checkout process and e-wallet integration. These features relieved her pain by reducing unnecessary steps and created gains by offering flexible payment options. This fit demonstrates the critical importance of transaction efficiency in fostering loyalty among busy professionals.

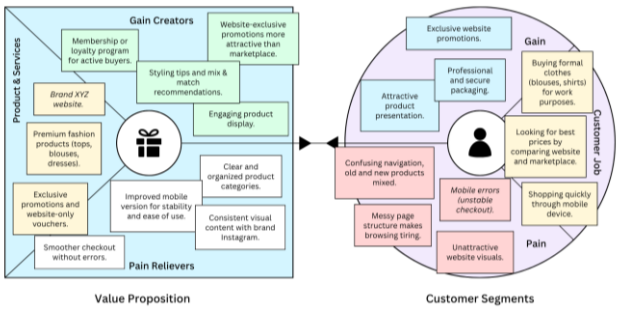


Figure 14. VPC of Rika

Rika's canvas emphasized her reliance on mobile shopping. Her pains were broken layouts and poor navigation on smartphones, while her gains included smooth browsing and responsive design. On the value map in Figure 14, the introduction of responsive layouts and simplified navigation paths resolved these pains. Enhanced product image displays created additional gains by improving usability on small screens. This case highlights the importance of mobile-first design for e-commerce platforms in Indonesia, where smartphone use dominates online shopping.

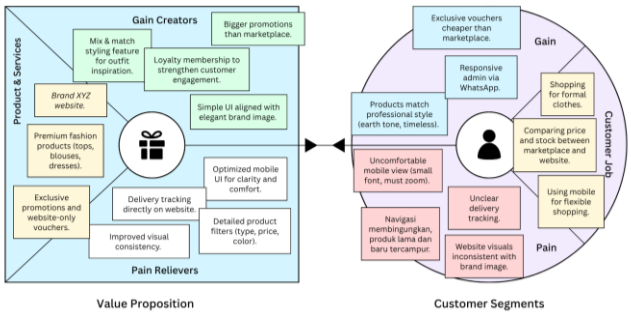


Figure 15. VPC of Lestari

Lestari's profile reflected her professional sensitivity to design. Her pains involved outdated typography and inconsistent color schemes, which undermined her trust in the website. Her desired gains included elegant, modern visuals consistent with the brand's identity. The value map in Figure 15 proposed a neutral-toned, modern theme and consistent typography across all pages. These changes relieved her frustration and created gains by reinforcing a sense of premium identity. The canvas shows how aesthetic alignment can be as important as functionality in influencing satisfaction.

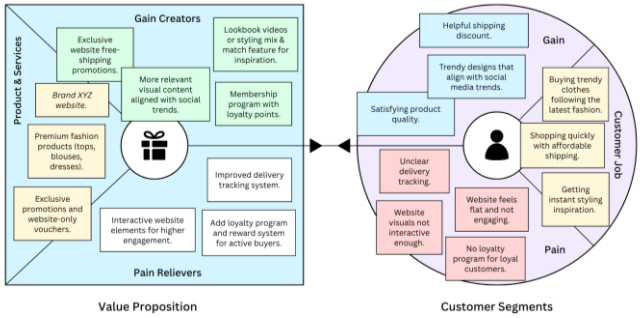


Figure 16. VPC of Maya

Maya's canvas revealed her dual perspective as both a shopper and an influencer. Her pains included embarrassment at the outdated style, while her gains were stylish presentation and credibility for public recommendation. The value map in Figure 16 introduced a redesigned interface aligned with the brand's social media visuals, along with high-resolution imagery. These features relieved her dissatisfaction and created reputational gains, making her more willing to endorse the website. This canvas demonstrates the reputational risks and opportunities tied to visual design quality.

G. Ideate Stage: SCAMPER Technique

The ideation phase applied the SCAMPER method (Substitute, Combine, Adapt, Modify, Put to other use, Eliminate, Reverse) to generate innovative solutions for the Brand XYZ website redesign [23]. Although the SCAMPER process produced numerous ideas, only those most relevant to user pain points identified in the empathy, ACSI, and journey stages were prioritized for prototyping. Between the ideation and prototyping phases, a relevance–feasibility matrix was

DOI: 10.34148/teknika.v14i3.1387
TEKNIKA, Volume 14(3), November 2025, pp. 490-500
ISSN 2549-8037, EISSN 2549-8045

applied to evaluate all SCAMPER-generated ideas (Table 3). Each concept was rated on two dimensions—its direct relevance to user pain points and its technical feasibility for short-term implementation. Only ideas scoring high on both criteria were advanced to prototyping.

Table 3. SCAMPER Ideation

SCAMPER Element	Ideation Output
Substitute	Replace slow, multi-step checkout with an instant three-step flow; substitute descriptive size chart with an interactive size chart directly on product pages.
Combine	Combine promo displays with visual identity by embedding banners into homepage layout; link lookbook visuals directly to product collections.
Adapt	Adapt simplified navigation models from leading e-commerce sites to streamline browsing; adopt mobile-first design standards for better responsiveness.
Modify	Modify homepage with a modern, neutral-toned theme consistent with social media branding; modify product image displays for larger, clearer visuals.
Put to use	Repurpose lookbook visuals to act as styling inspiration directly linked to product pages.
Eliminate	Eliminate unnecessary pop-ups, retaining only essential promotional information.

From these outputs, the features most strongly aligned with user needs were shortlisted for prototyping.

Table 4. Prioritized Features and User Needs

Proposed Feature	User Need Addressed
Mega menu navigation	Easy discovery of products through clear categories
Modern homepage with consistent typography and neutral-toned theme	Aesthetic coherence aligned with brand identity
Product page with interactive size chart, larger images, and clear descriptions	Quick and reliable product evaluation
Three-step checkout with guest checkout and e-wallet support	Fast, stable, and flexible transactions
Mobile-responsive layout	Comfortable browsing and transactions on smartphones

From these outputs, the features most strongly aligned with user needs were shortlisted for prototyping. Table 4 summarizes the prioritized features that directly addressed the critical pain points identified in earlier stages. Other SCAMPER-generated ideas, such as loyalty programs and advanced community features, were not discarded but intentionally reserved for potential future development to maintain focus and feasibility in this redesign cycle.

H. Prototype Stage: Developing Interactive Mockups

Following the ideation stage, where prioritized features were generated using the SCAMPER method, the next step was to transform these ideas into tangible design artifacts. Prototyping served as the bridge between abstract conceptualization and concrete interface design, enabling visualization of how solutions could directly address user pain points. Figma was selected as the primary tool due to its collaborative nature, cloud-based accessibility, and capacity for rapid iteration, which made it possible to integrate stakeholder feedback efficiently throughout the design process.

The prototyping phase was guided by three key principles. Usability ensured that navigation and interactions would be simple, intuitive, and consistent with established user expectations [5], [6]. Mobile responsiveness was prioritized in recognition of the fact that a majority of e-commerce traffic in Indonesia now originates from smartphones, making adaptive layouts and touch-friendly interactions essential for engagement [13]. Brand consistency ensured that the visual identity of Brand XYZ's website aligned with its established image on social media, thereby reinforcing trust and strengthening brand equity [7], [8].

By applying these principles, the prototypes became more than aesthetic improvements; they embodied a strategic approach to resolving the functional, emotional, and experiential gaps identified in the empathize and define stages. Each design decision was grounded in user research, ensuring that the prototypes would not only enhance the technical performance of the website but also elevate customer satisfaction and loyalty.



Figure 17. Prototype of Homepage

The redesigned homepage (Figure 17) introduced a clear mega menu for navigation, high-quality product imagery, and featured collections on the first fold. The design emphasized minimalism with a neutral-toned palette, aligning the digital presentation with Brand XYZ's Instagram identity. By placing search and promotional banners prominently, the homepage reduced friction at the awareness and browsing stages. The prototype thus addressed Sari's and Maya's criticisms regarding confusing categories and outdated visuals.

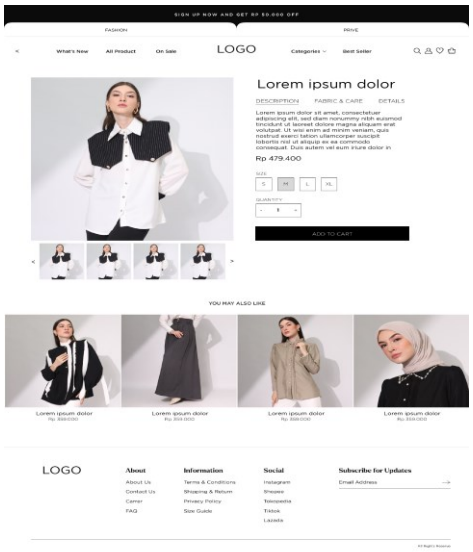


Figure 18. Prototype of Product Page

The product page (Figure 18) redesign introduced larger, high-resolution images with zoom functionality, simplified descriptions, and a more prominent "Add to Cart" button. The layout was fully responsive, ensuring a seamless experience on mobile devices. This change directly resolved Rika's complaints about broken layouts and poor visibility on her smartphone. The product page also reinforced brand aesthetics through consistent typography and modern styling, which spoke directly to Lestari's concerns about professionalism.

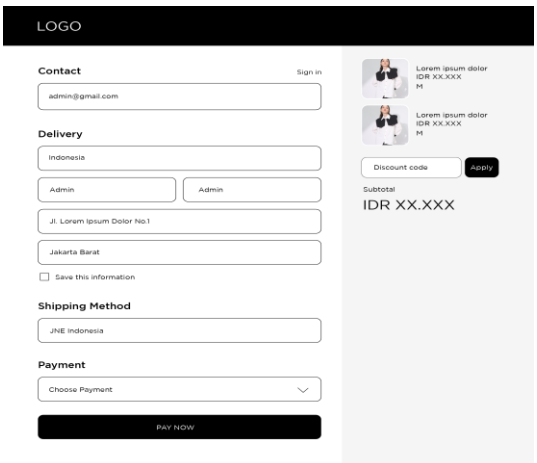


Figure 19. Prototype of Checkout Flow

The checkout flow was reduced from five steps to three: cart summary, shipping details, and payment. The redesign included multiple payment options, such as bank transfer, credit card, and e-wallets, which addressed Dina's frustration with limited methods (Figure 19). Progress indicators and simplified forms were added to reduce user anxiety during checkout. This streamlined flow not only relieved pains but also acted as a gain creator, offering efficiency and convenience that customers demanded. Together, the prototypes embodied the ideation outcomes by translating abstract solutions into tangible interfaces. The fidelity of the prototypes was high enough to allow usability testing, ensuring that respondents could meaningfully evaluate improvements.

I. Usability Testing

Prototypes were tested with the same five respondents using the think-aloud method (Figure 20). Each participant was asked to browse the homepage, select a product, and complete a checkout. Feedback was recorded and analyzed.

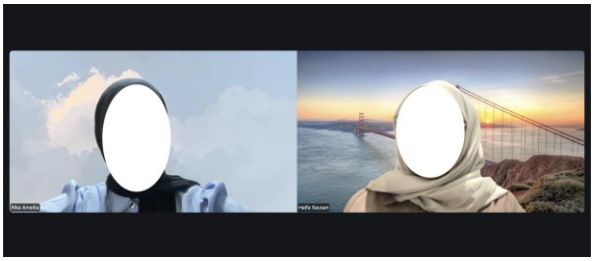


Figure 20. Usability Testing Session

During testing, Sari remarked that she could now find products "much faster" using the mega menu. Dina confirmed that the checkout was "finally efficient" and that the availability of e-wallets removed her main hesitation. Rika praised the mobile responsiveness, noting that "everything fits perfectly on my screen now." Lestari expressed satisfaction with the visual consistency, while Maya commented that the new look was "stylish enough to recommend" to her audience. Collectively, the usability testing showed unanimous agreement that the redesign was easier to use, more modern, and more representative of Brand XYZ's identity. These insights confirmed that the prototypes successfully relieved pains and created gains as identified in the empathy maps and VPCs.

J. Post-Test ACSI Results

Following usability testing, the ACSI survey was administered again to evaluate satisfaction with the redesigned prototypes. The same five dimensions—customer expectations, perceived quality, perceived value, customer satisfaction, and loyalty—were scored and converted using the ACSI formula.

Table 5. Post-Test ACSI Scores

Dimension	Mean ($\bar{x}$)	ACSI Conversion	Category
Customer Expectations	3.8668	71.67	Moderate
Perceived Quality	4.34	83.5	High
Perceived Value	4	75	Moderate
Customer Satisfaction	4.6	90	High
Customer Loyalty	4.3	82.5	High
Overall	**4.2212**	**80.53**	**High**

The overall post-test ACSI score as shown in Table 5 rose sharply to 80.53, moving the redesigned website into the high satisfaction category. The most significant gains were seen in customer satisfaction (90.00) and perceived quality (83.50), which highlight that the improvements in navigation, visual design, and checkout efficiency directly addressed the issues users had previously reported. These results demonstrate that the redesign not only removed technical and usability barriers but also created a more positive overall shopping experience, confirming the effectiveness of the applied Design Thinking approach.

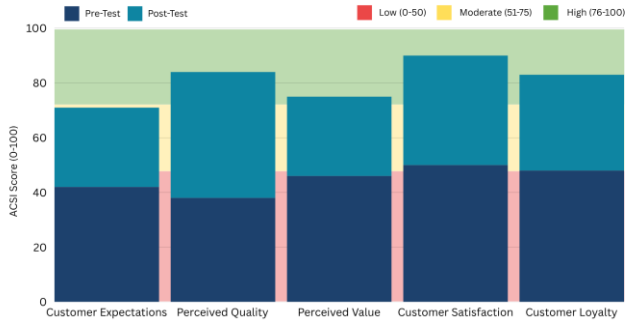


Figure 21. Comparative ACSI Pre-Test vs Post-Test Results

The Figure 21 illustrates a substantial increase across all five dimensions. Overall satisfaction rose from 44.42 (low) to 80.53 (high), demonstrating the clear success of the redesign. Respondent feedback aligned with these results: Sari emphasized greater efficiency, Dina praised transaction convenience, Rika highlighted mobile optimization, Lestari recognized coherent visual design, and Maya acknowledged improved credibility. Together, these perspectives confirmed that the redesign met both functional and emotional expectations. Compared with earlier studies that reported only incremental usability improvements in e-commerce [24], Brand XYZ's case demonstrates a more substantial gain, likely due to the integration of qualitative empathy mapping with quantitative ACSI validation. This methodological combination represents the study's contribution to scholarship, offering a hybrid approach that balances human-centered insights with statistical rigor.

K. Discussion

The findings of this study demonstrate that applying the Design Thinking methodology to website redesign produced significant improvements in both usability and customer satisfaction for Brand XYZ. The empathy maps revealed persistent frustrations across multiple personas, ranging from poor navigation and weak aesthetics to inefficiencies in checkout and limited payment options. These qualitative insights were validated by the ACSI pre-test, which placed the old website in the low satisfaction category with an overall score of 44.42. The user journey analysis further confirmed that friction was concentrated in the browsing, selection, and checkout stages—critical touchpoints in e-commerce where convenience and trust play decisive roles in shaping purchase behavior [2], [18]. The combination of empathy maps, user journey maps, and the define stage highlighted recurring challenges such as unclear product categorization, outdated visual identity, and a lengthy checkout process. Although these issues appeared in different scenarios, they reflected the same fundamental weaknesses in navigation, aesthetics, and transactional flow. By consolidating these insights, the study avoided redundancy and established clear design priorities. The consistency between qualitative feedback and quantitative ACSI results validated the necessity of redesign and ensured that the proposed solutions were firmly based on user experience evidence.

The Value Proposition Canvas clarified the alignment between customer jobs and the value offered by the redesigned website. For Sari and Dina, efficiency was the main priority, while for Rika, mobile responsiveness was crucial. Lestari and Maya, on the other hand, emphasized visual identity as the defining factor of satisfaction. By linking these user needs with design solutions such as mega menu navigation, a three-step checkout, responsive layouts, and modern visual styling, the VPC demonstrated a strong fit between expectations and outcomes. This aligns with Osterwalder's argument [25] that organizations succeed when their value propositions effectively relieve customer pains and generate tangible gains. The prototypes translated these insights into concrete design features, which were validated through usability testing. The positive feedback confirmed that the redesign successfully resolved key user frustrations: slow navigation was addressed through the mega menu, inefficiencies in checkout were minimized with a simplified flow and additional payment methods, and outdated visuals were replaced by a consistent modern aesthetic. Respondents also expressed emotional satisfaction, with Maya noting that she now felt confident recommending the website to her followers. This indicates that the redesign not only improved functional usability but also strengthened brand perception and credibility.

The ACSI post-test provided quantitative confirmation of these improvements. Scores across all dimensions increased substantially, with the overall index rising to 80.53, placing the redesigned site in the high satisfaction category. The largest improvement appeared in customer satisfaction (90.00), followed by perceived quality (83.50). These findings support Norman's argument [5] that eliminating usability barriers enhances both perceived quality and emotional satisfaction.

CC BY SA

The increase in loyalty aligns with Keller's perspective [8] that consistent brand identity deepens consumer attachment. Overall, the integration of Design Thinking and ACSI provided a comprehensive evaluation framework. Design Thinking supplied a structured, user-centered process for diagnosing and addressing pain points, while ACSI offered a rigorous quantitative measure of improvement. This dual approach strengthens the study's contributions both practically and theoretically. Practically, it offers Brand XYZ a validated roadmap for digital transformation. Theoretically, it bridges user-centered design with satisfaction evaluation by demonstrating that qualitative insights from Design Thinking can be systematically linked with quantitative outcomes.

IV. CONCLUSION

This study examined how Design Thinking could enhance the Brand XYZ website and whether these improvements would increase customer satisfaction as measured by ACSI. The results were conclusive: empathy maps, user journey analyses, and VPCs revealed key weaknesses in the old site, including poor navigation, outdated aesthetics, and inefficient checkout processes. Prototypes were developed to address these issues, and usability testing confirmed that the redesign met user expectations. The ACSI post-test validated these improvements quantitatively, showing a rise from 44.42 (low) to 80.53 (high), shifting the site into the high satisfaction category. The findings contribute both theoretically and practically. Theoretically, they demonstrate how Design Thinking and ACSI can be integrated to produce a more comprehensive evaluation of digital design outcomes. Practically, they provide Brand XYZ with a structured roadmap to strengthen competitiveness in an increasingly crowded fashion e-commerce market. Limitations include the small number of respondents and prototype-based testing rather than live implementation. Future research should involve a larger sample, longitudinal assessment after deployment, and integration of emerging technologies such as AI-driven personalization to further improve user experience. Although the small sample size (n = 5) restricts statistical generalization, it remains methodologically appropriate for exploratory validation within a qualitative Design Thinking framework.

REFERENCES

[1] Bank Indonesia, Appendix to the Indonesia Economic Report 2022. Bank Indonesia, 2022. Available at: https://www.bi.go.id/id/publikasi/laporan/Documents/9_LPI2022_LAMPIRAN.pdf

[2] D. Gefen, E. Karahanna, and D. W. Straub, "Trust and TAM in Online Shopping: An Integrated Model," MIS Quarterly, vol. 27, no. 1, pp. 51–90, 2003. doi:10.2307/30036519

[3] S. Krug, Don't Make Me Think, Revisited: A Common Sense Approach to Web Usability, 3rd ed. San Francisco, CA, USA: New Riders, 2014.

[4] Brand XYZ Internal Report, Website Performance Data. Jakarta, Indonesia: Brand XYZ, 2025.

[5] D. A. Norman, Emotional Design: Why We Love (or Hate) Everyday Things. New York, NY, USA: Basic Books, 2004.

[6] J. J. Garrett, The Elements of User Experience: User-Centered Design for the Web and Beyond. Berkeley, CA, USA: New Riders, 2011.

[7] D. A. Aaker, Building Strong Brands. New York, NY, USA: Free Press, 1996.

[8] K. L. Keller, Strategic Brand Management: Building, Measuring, and Managing Brand Equity, 4th ed. Harlow, U.K.: Pearson Education, 2013.

[9] E. T. Loiacono, R. T. Watson, and D. L. Goodhue, "WebQual: An instrument for consumer evaluation of web sites," Int. J. Electron. Commerce, vol. 11, no. 3, pp. 51–87, 2007, doi: 10.2753/JEC1086-4415110302.

[10] M. Wolfinbarger and M. C. Gilly, "eTailQ: Dimensionalizing, measuring and predicting etail quality," J. Retail., vol. 79, no. 3, pp. 183–198, 2003, doi: 10.1016/S0022-4359(03)00034-4.

[11] B. Yoo and N. Donthu, "Developing a scale to measure the perceived quality of an Internet shopping site (SITEQUAL)," Q. J. Electron. Commerce, vol. 2, no. 1, pp. 31–47, 2001.

[12] L. M. Hassan, E. M. Shiu, and S. Parry, "The drivers of online purchasing: The role of consumer confidence, trust, and website usability," International Journal of Consumer Studies, vol. 40, no. 3, pp. 327–334, 2016, doi: 10.1111/ijcs.12252.

[13] L. Wroblewski, Mobile First. New York, NY, USA: A Book Apart, 2011.

[14] T. Brown, Change by Design: How Design Thinking Creates New Alternatives for Business and Society. Boston, MA, USA: Harvard Business Press, 2009.

[15] A. N. Cornelia, "Redesigning the interface of beauty E-commerce website using Design Thinking approach: Case study of PT XYZ website," AIP Conference Proceedings, vol. 3057, no. 1, p. 020001, 2023, doi: 10.1063/5.0239670.

[16] A. Bhattacherjee, "Understanding information systems continuance: An expectation-confirmation model," MIS Quarterly, vol. 25, no. 3, pp. 351–370, 2001.

[17] C. Fornell, M. D. Johnson, E. W. Anderson, J. Cha, and B. E. Bryant, "The American Customer Satisfaction Index: Nature, purpose, and findings," Journal of Marketing, vol. 60, no. 4, pp. 7–18, 1996.

[18] Yulianto, R. Prabowo, and F. Santoso, "Redesign website Mitra10 untuk meningkatkan kepuasan pelanggan," ETNIK. [Online]. Available: https://etnik.rifainstitute.com/index.php/etnik/article/view/277

[19] R. M. A. Surya, D. C. Ramdani, I. Imaman, and A. Amrulloh, "Analisis peran Desain UI terhadap Kepuasan Pengguna di website Tokopedia," JIKO (Jurnal Informatika dan Komputer). [Online]. Available: https://ejournal.akakom.ac.id/index.php/jiko/article/view/835

[20] Kwon, Jieun & Choi, Younghyun & Hwang, Yura. Enterprise Design Thinking: An Investigation on User-Centered Design Processes in Large Corporations. Designs. 5. 43. 10.3390/designs5030043, 2021.
[21] Miki, Hiroyuki, User Experience Evaluation Framework for Human-Centered Design. 10.1007/978-3-319-07731-4_59, 2014.
[22] Kim M Nazi, Veterans' voices: use of the American Customer Satisfaction Index (ACSI) Survey to identify My HealtheVet personal health record users' characteristics, needs, and preferences, Journal of the American Medical Informatics Association, Volume 17, Issue 2, March 2010, Pages 203–211, https://doi.org/10.1136/jamia.2009.000240
[23] M. Michalko, Thinkertoys: A Handbook of Creative-Thinking Techniques, 2nd ed. Berkeley, CA, USA: Ten Speed Press, 2006.
[24] M. Tarafdar and J. Zhang, "Determinants of reach and loyalty: a study of website performance and implications for website design," Journal of Computer Information Systems, vol. 48, no. 2, pp. 16–24, 2007, doi:10.1080/08874417.2007.11646005.
[25] A. Osterwalder and Y. Pigneur, Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers. Hoboken, NJ, USA: Wiley, 2010