

Individual Case Study on Huawei

Kishan Prasad Jaiswal

BSc. (Hons) Computing, Softwarica college of IT & E-commerce, Coventry University

STA309IAE Design Thinking and Innovation

Shankar Shrestha

Feb 25, 2023

Table Of Content

Introduction	4
Issues that Huawei Mobile Company is trying to solve	4
Realization of the Gap in Design Thinking Approach.....	4
Creativity and Innovation.....	5
Myths	5
Design Thinking Approach (Action Phases)	6
Empathize	7
Empathize-Observation	7
Empathize-Engagement.....	7
Empathize- Immersion.....	8
User feedback	9
Empathy Map.....	10
Define.....	11
Design Brief	11
Stakeholders Map	12
Journey Map	13
Opportunity Map	15
Ideate	16
Prioritization Map	16
Affinity Map	17
Idea Evaluation	18
Prototype Phase.....	19
Prototype	19
Storyboard	20
Test Phase	21
Feedback Capture grid	21
Observer's Note	22
Prototype Evaluation	22
Impact of Design Thinking in Huawei Mobile Company	23
Critical Reflection on Achieved Achievement and Proposed Recommendations	24
Conclusion.....	25
References	26

Table of Figures

Figure 1: Myths	5
Figure 2:Traditional Thinking Vs Design Thinking	5
Figure 3 Action Phases	6
Figure 4 Empathize -Observation	7
Figure 5 Empathize Engagement	8
Figure 6 Empathize Immersion	8
Figure 7 User Feedback.....	9
Figure 8 Persona	10
Figure 9 Empathy map	10
Figure 10 Design Brief	11
Figure 11 Stakeholders Map	12
Figure 12 Journey Map	13
Figure 13 Context Map	14
Figure 14 Opportunity Map	15
Figure 15 Prioritize Map.....	16
Figure 16 :Affinity Map	17
Figure 17 Idea Evaluation.....	18
Figure 18 Prototype Phase.....	19
Figure 19 Story Board	20
Figure 20 : feedback Capture grid.....	21
Figure 21 : Observer Feedback Note	22
Figure 22 : Prototype Evaluation	23
Figure 23 : Impacts of Design Thinking	24

Introduction

Issues that Huawei Mobile Company is trying to solve

The biggest issue faced by the company was the ongoing trade war between the United States and China. It led to the forbidding of Huawei from using American-made technology as well as pressed supporters by the US government. Huawei company has started developing its operating systems and chipset to replace American technology. The company has also made significant expenditures on research and development, intending to enhance existing products and develop new ones that can compete with its competitors. Another emerging problem that Huawei has been trying to tackle was its cybersecurity prestige. The US government and other countries have tried to accuse the company's product of showing a threat to national safety due to their alleged links to the Chinese government. Although facing many obstacles and competing with existing competitors, Huawei continued to the innovation of new products and involve new technologies. Restriction made by the United States had create a lot of impact on Huawei's smartphone business ([Huawei Marketing Gap Analysis 2023](#)).

Realization of the Gap in Design Thinking Approach

It is difficult to determine exactly at which design thinking approach to innovation is failing to be utilized in business without conducting a full analysis of Huawei Mobile Company's practices and goals. Yet, there are certain potential places where gaps may develop given the common challenges firms face when employing design thinking. But, in general, issues with implementing design thinking include a lack of knowledge or support from leadership, difficulties using the approach to solve complicated issues, and insufficient employee training and support. For their teams to successfully adopt design thinking in their innovation processes, Huawei could benefit from investing in training and development. Furthermore, creating an environment where failure is viewed as a learning opportunity rather than a setback can promote more creative problem-solving and experimentation ([Customer stories 2023](#)).

Creativity and Innovation

Myths

Figure 1: Myths

MYTHS(CREATIVITY AND INNOVATION)		
INNOVATION ONLY HAPPENS WITH BIG BUDGET	CREATIVITY IS ONLY FOR ARTISTS AND DESIGNERS	INNOVATION REQUIRES A "EUREKA" MOMENT
Huawei has shown that innovation can happen on any budget, by using design thinking to solve problems in creative and effective ways. The company encourages its employees to think creatively, regardless of their resources, and has demonstrated that great ideas can come from anywhere within the organization.	Huawei has shown that creativity is a critical skill for everyone in the organization, not just those in arts or design departments. The company encourages its employees to think creatively and to bring new ideas to the table, regardless of their role or department.	Huawei has demonstrated that innovation is a process, not a single moment. By using design thinking, the company has shown that innovation can happen through iterative experimentation, testing, and improvement, rather than relying on a single, brilliant idea.

Traditional Thinking and Design Thinking

Figure 2: Traditional Thinking Vs Design Thinking

Traditional Thinking	Design Thinking
Efficiency	Empathy
Minimizing risk	Understanding customer needs and wants
Incremental Improvement	Unique customer experiences
Stability	Innovation
Reliance on proven practices	Experimentation and iteration

Design Thinking Approach (Action Phases)

Understanding the user's wants, goals, and pain areas is the main purpose of the empathize phase. This entails performing research and acquiring information using a variety of techniques, including user feedback, interaction, immersion, and observation. However, in general, common challenges with implementing design thinking include lack of understanding or buy-in from leadership, difficulty in applying the process to complex problems, and inadequate training and support for employees ([huawei,2022](#)).

Figure 3 Action Phases

ACTION PHASES				
EMPATHIZE	DEFINE	IDEATE	PROTOTYPE	TEST
This phase involves gaining a deep understanding of the user and their needs through research and observation. Huawei may conduct surveys, interviews, and field studies to gather insights into the pain points and frustrations of its customers.	This phase involves synthesizing the insights gathered during the empathy phase and defining the problem that the design process will address. Huawei may use these insights to identify the root cause of customer frustrations and to create a problem statement that will guide the rest of the design process.	In this phase, Huawei will generate and evaluate potential solutions to the problem defined in the previous phase. This may involve brainstorming sessions, sketching, and creating prototypes of potential solutions.	This phase involves creating a physical or digital representation of the solution to be tested with users. The prototype should be simple and low-fidelity, allowing for rapid iteration and testing of potential solutions.	In this phase, Huawei will test the prototype with a subset of users to gather feedback and validate the solution. The feedback will be used to refine and improve the solution, which will then be tested again until a final solution is identified.

Empathize

Empathize-Observation

Figure 4 Empathize -Observation

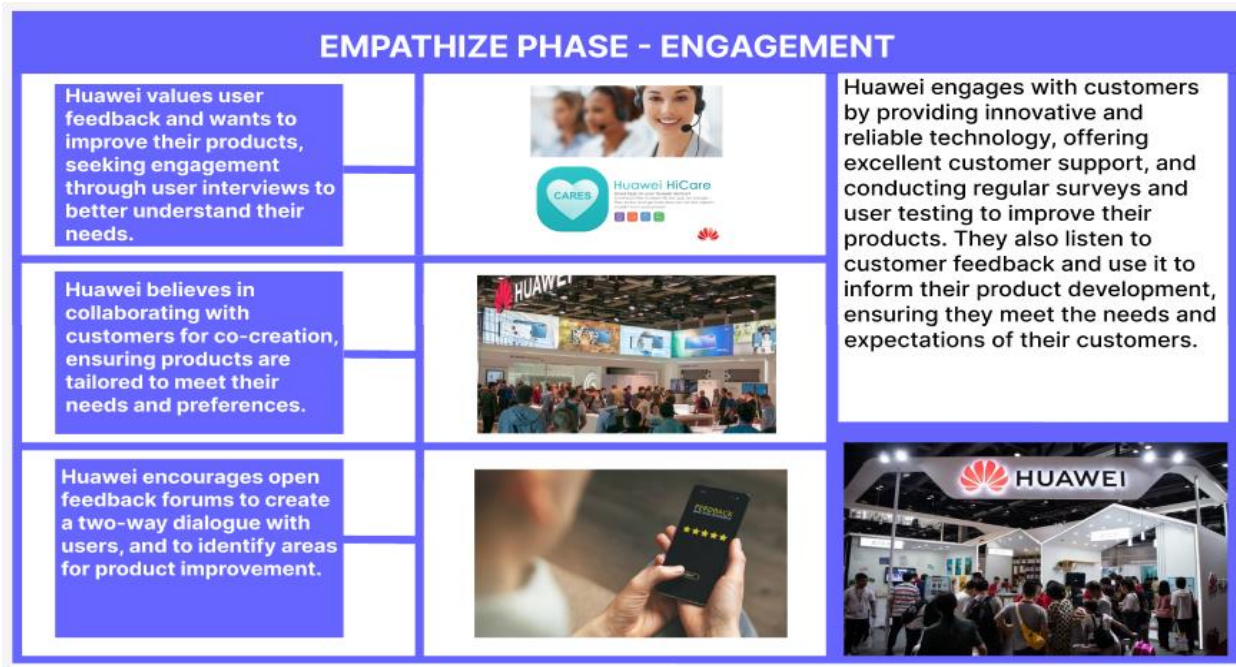


Empathize in design think is to understand other feeling and point of view and behaviors of end user. Huawei empathize observation reflects its strong market position, customer focus and technological innovation. The US restrictions have posed serious problems for the Huawei mobile company, limiting them access to vital markets and technologies and causing a fall in sales and market share ([Building a fully connected, Intelligent World 2022](#)).

Empathize-Engagement

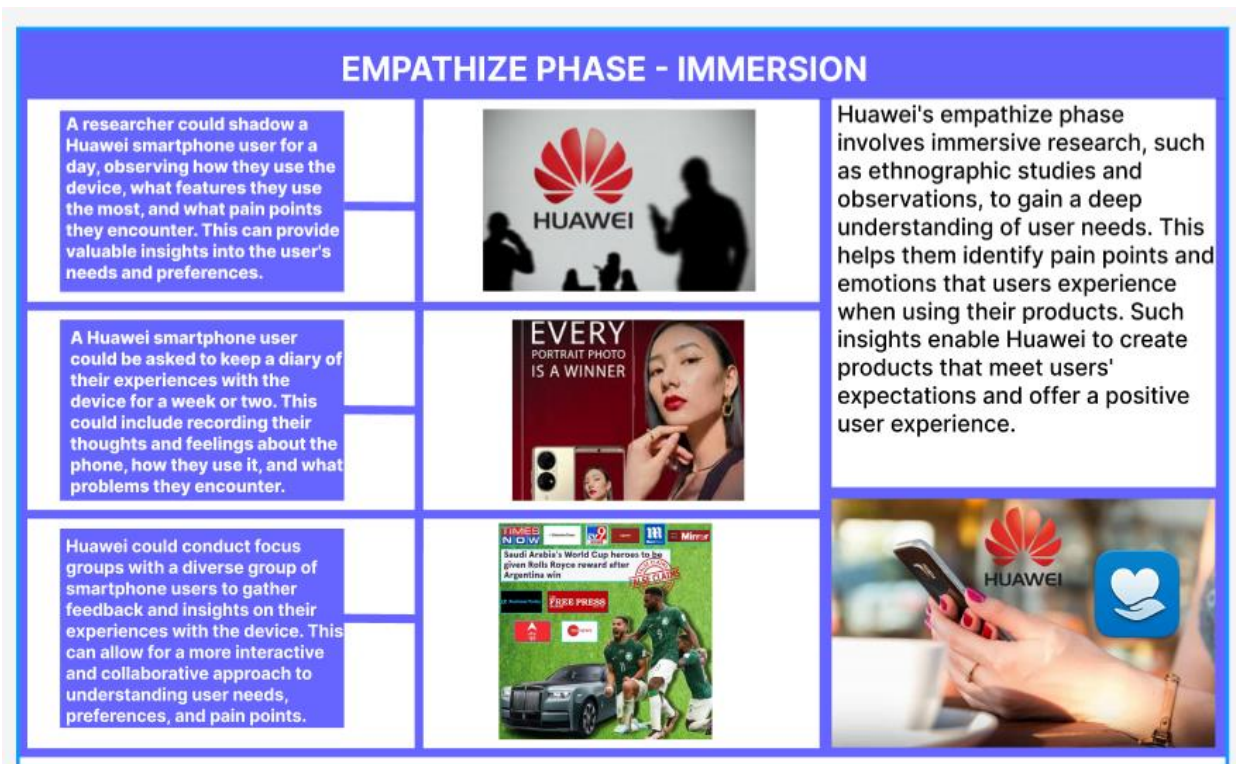
Huawei demonstrated empathy by constantly listening to customer feedback, fixing problems, and creating products with user needs in mind. They give great importance to getting to know their clients well and understanding their perspectives.

Figure 5 Empathize Engagement



Empathize- Immersion

Figure 6 Empathize Immersion



Huawei empathize phase involves immersive research, such as ethnographic studies and observations, to gain a deeper understanding of user needs.

User feedback

The user feedback received throughout the design thinking process can be used to support or challenge assumptions about the needs, wants, and behaviors of the target user. In the end, consumer needs and preferences will define the phone's brand and model. Make an informed option that meets your demands by doing research and reading reviews from many sources.

Figure 7 User Feedback

USER FEEDBACK	
CUSTOMER PROFILE	
<ul style="list-style-type: none"> • Hari Shah, 28 • Software Engineer • Using Huawei Y6's Model 	<ul style="list-style-type: none"> • Have one child • Like to use new type of mobile phone • Dislikes the costly phone
QUESTIONS TO ASK :	
List of questions <ul style="list-style-type: none"> • What is the ongoing trade war between the United States and China? • Why has the US government banned Huawei from using American-made technology? • How has the ban affected Huawei's business operations? 	Why do we ask those question ? <ul style="list-style-type: none"> • This question sets the context for the discussion on why Huawei is affected by the trade war. • To explore the specific reasons why Huawei has been targeted by the US government. • To know the impact of the ban on Huawei's ability to conduct business and the potential consequences on its market share and revenue
USER FEEDBACK	
Observation and feedback <ul style="list-style-type: none"> • Most Huawei product are being advertised • Increasing the camera quality and adding the more storage and increasing the ram size • Good to use and affordable and fulfile the requirements 	Insights/ Actions <ul style="list-style-type: none"> • Increased awareness and concern about the potential impact of the trade war on global markets and economies. • Fear and uncertainty regarding the impact of the Huawei ban on their own mobile device usage and data security. • Invest in research and development to improve their technological capabilities.

Customer Persona

A persona is created throughout the design thinking process to aid designers in empathizing to its target users, understanding their requirements and routines, and creating products that comply to their unique needs. A persona is created throughout the design thinking process to aid designers in empathizing to its target users, understanding their requirements and routines, and creating products that comply to

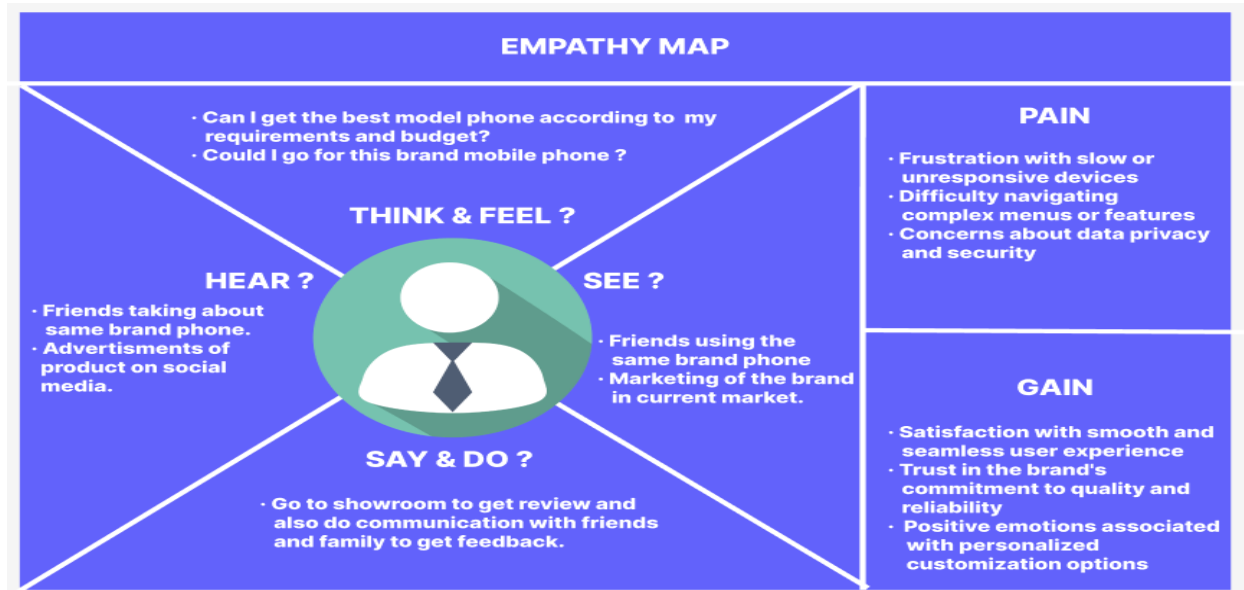
their unique needs. It also helps to guarantee that the final product is customer and provides a positive user experience.

Figure 8 Persona

PERSONA	
NAME:HARI SHAH,28	
PROFILE/LIFESTYLE	CHARACTERISTICS
<ul style="list-style-type: none"> • Senior Software Engineer, Married • Exploring the technology is his passion • Owns an apartment in Chitwan 	<ul style="list-style-type: none"> • He is a good listener and enjoys having meaningful conversation with people • Active and have good communication skills •
GOALS/AMBITIONS	BEHAVIOURS/HABITS
<ul style="list-style-type: none"> • He want's to advance his career and become a top software engineer in his compnay 	<ul style="list-style-type: none"> • He enjoys reading tech blogs. • Have a intention to know about new things • Up to date about technology
FEARS/CHALLENGES	INFLUENCERS & ACTIVITIES
<ul style="list-style-type: none"> • Hari is concerned about the impact of technology on his childrens. • Hari struggles with work-life . 	<ul style="list-style-type: none"> • Hari is influenced by his family and colleagues. • Hari also volunteers at a local charity and participates in community events

Empathy Map

Figure 9 Empathy map



It is a road map designed to comprehend and share the experiences of customers. The Huawei mobile corporation can utilize an empathy map to assess and understand the viewpoint of its customers.

Huawei can benefit from empathy by being able to comprehend the requirements, wants, and problems of its customers. This can guide the creation of goods and services that more effectively satisfy those needs, boosting client happiness and loyalty.

Define

The Six Sigma Methodology's Define stage is the first stage, and it seeks to enhance business procedures by decreasing defects and variability. The goals set, scope, and stakeholders are identified during this phase, and a project is formed to guide the team's efforts. The Define phase establishes the framework for the remainder of the Six Sigma process.

Design Brief

Figure 10 Design Brief

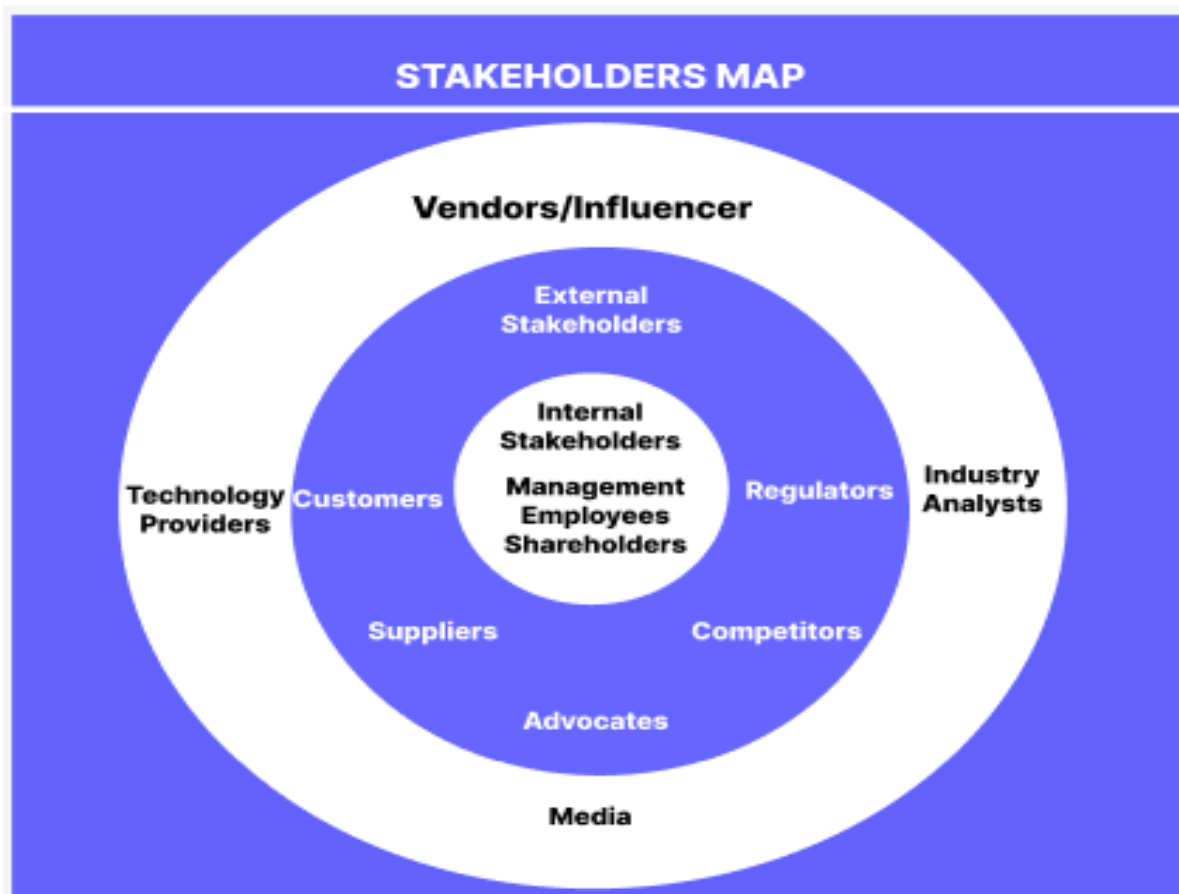
DESIGN BRIEF	
USER PRECEPTION/FEEDBACK	
• Hari need a new model phone with affordable price having more storage and good camera qualities	• He wants the mobile having all features and with more storage
PROBLEM STATEMENT(POINT OF VIEW)	
• Connection with Chinese government as well as prospective active participation in spying have resulted in negative response in market	
DESIGN GOAL/ OBJECTIVE (HOW MIGHT WE)	
• How might we make our product affordable forever one with high quality and less price and get the customer satisfaction ?	
DESIGN REQUIUREMENTS	
<ul style="list-style-type: none">• Design should be intuitive and user-friendly, allowing for easy navigation and operation of the device.• The screen should have high resolution, good color accuracy, and appropriate brightness levels for use in different lighting conditions.• High-quality materials should be used to enhance durability and aesthetics.• The battery should have a long life and support fast charging to minimize downtime and maximize convenience.	

Stakeholders Map

Stakeholders map is the visual reflection of the stakeholder interest and their influences on project. Stakeholder are divided into internal and external stakeholders where internal stake holders

Figure 11 Stakeholders Map

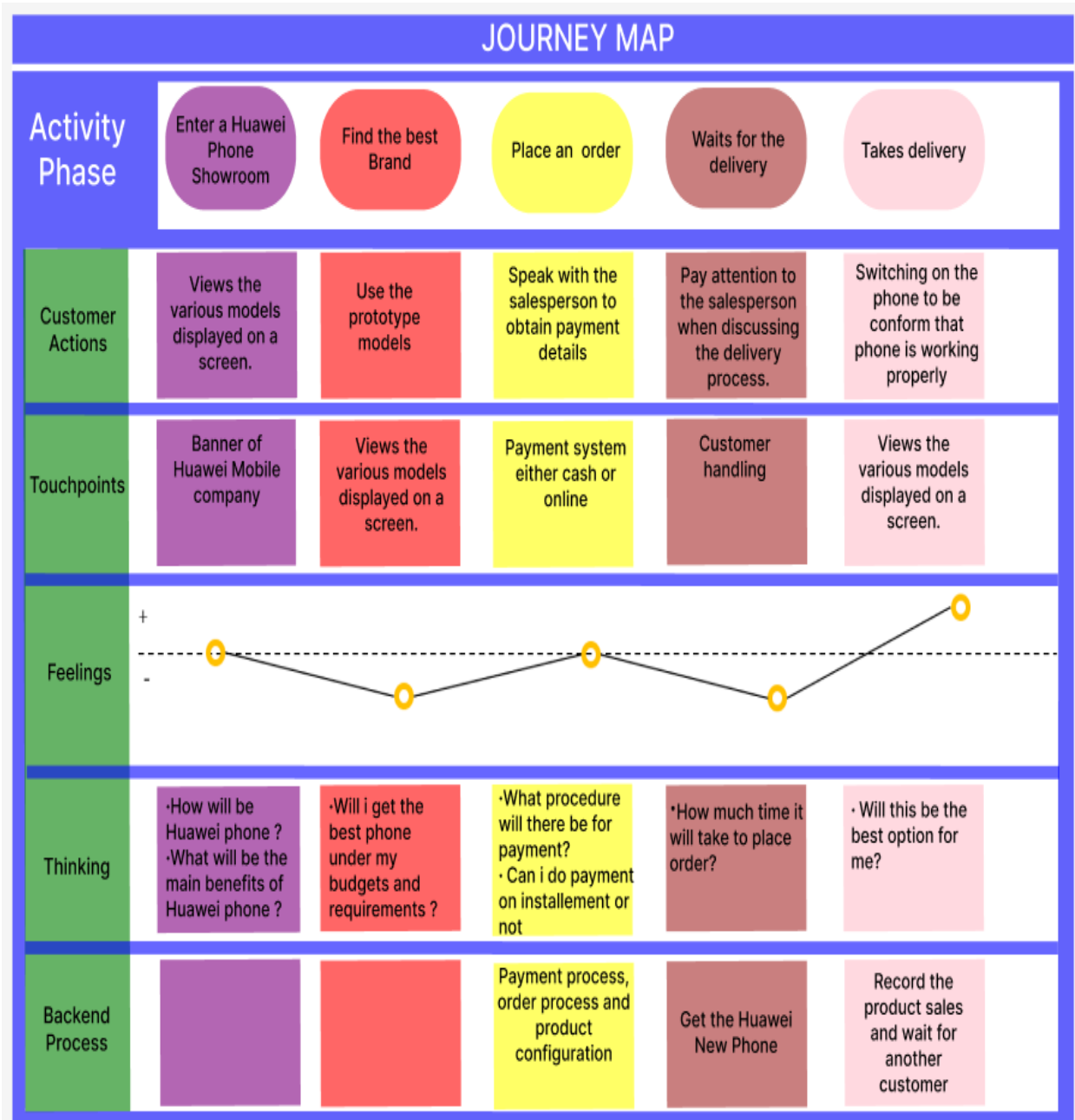
involve employees, management, and shareholders and on other side external stakeholders includes suppliers, communities, customers, and regulators.



Journey Map

This journey map reflects the journey of the customer from beginning to end phase as a customer, it shows that how the customer is engaged with the company. Also, the interaction done between the salespersons man and customer journey/experience with the company.

Figure 12 Journey Map



Context Map

The context map facilitates understanding of the limitations, relationships, and interactions of each subsystem with other systems. The context map provides a high-level perspective of the system's architecture and may be employed to identify potential weak points or dangerous circumstances.

Figure 13 Context Map

CONTEXT MAP			
TARGET USERS/ USERS NEEDS		TECHNOLOGY FACTORS	
<ul style="list-style-type: none">• Elderly, aged 65 and above• Living alone at home in village• Young teenage childrens		<ul style="list-style-type: none">• For proper health, a mobile alarm can be set for medicine schedule.• Health check up from mobile .• Young childrens can know about technology	
BUSINESS FACTORS	TRENDS	UNCERTAINTIES	
<ul style="list-style-type: none">• Competition with others mobile companies.• Launch of new brands• Government Regulations	<ul style="list-style-type: none">• Rising demand for new brands• Durable Phone with more features and storage	<ul style="list-style-type: none">• Rising demand for new brands• Security Concerns• Supply Chain Disruptions	
OTHER QUESTIONS ?			
<ul style="list-style-type: none">• What is the company doing to ensure access to key technologies and components?• What steps is Huawei taking to overcome the challenges posed by the US trade ban ?			

Opportunity Map

Figure 14 Opportunity Map



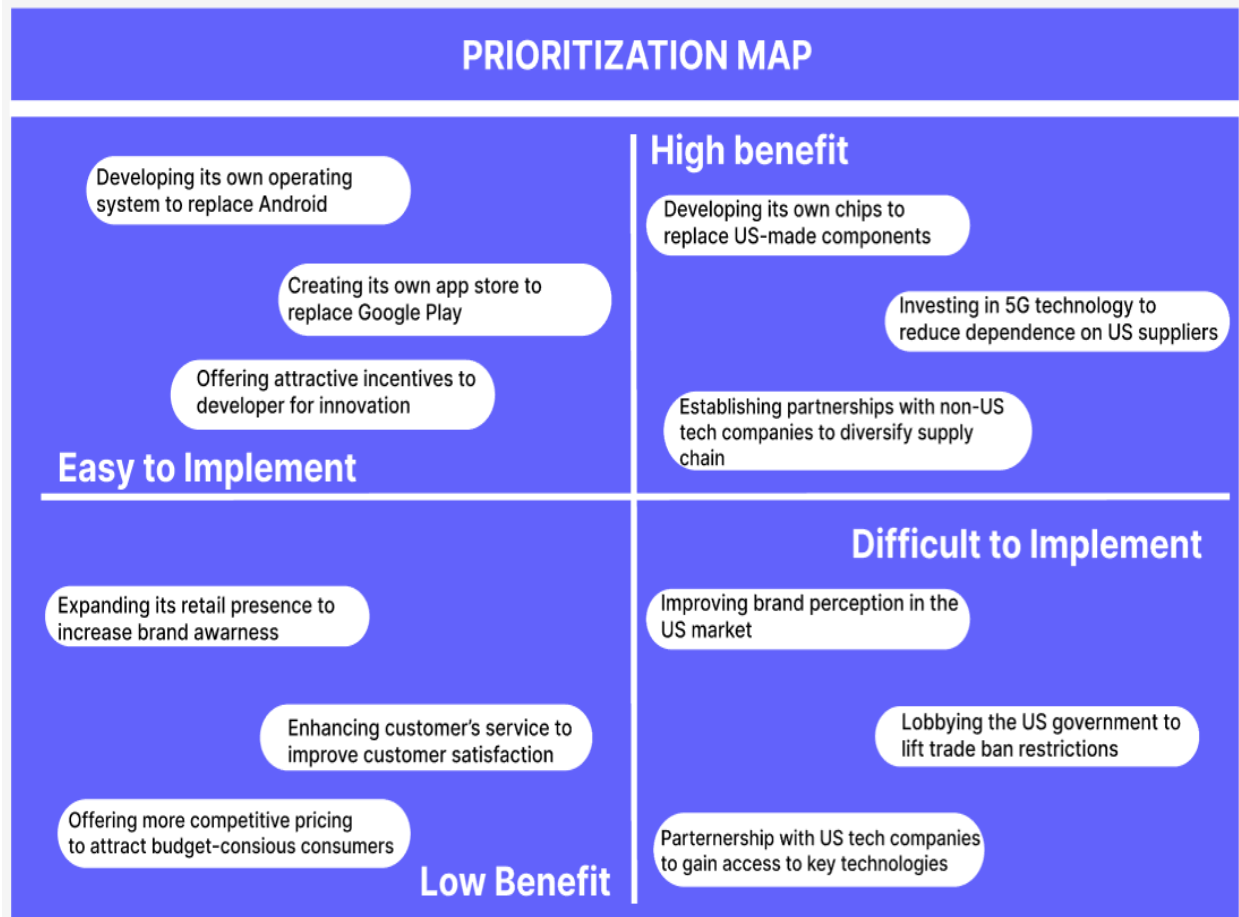
The above opportunity map shows the opportunity places for the Huawei Mobile Company according to the Retail based, area of opportunity, Home Based and in Mass that leads to innovation of the company.

Ideate

In this ideate phase Prioritization map, Affinity Map and Idea Evaluation is done for developing the new ideas. Brain Storming, experimentation, and exploration on the basic of different perspectives is done to come up with new solutions.

Prioritization Map

Figure 15 Prioritize Map

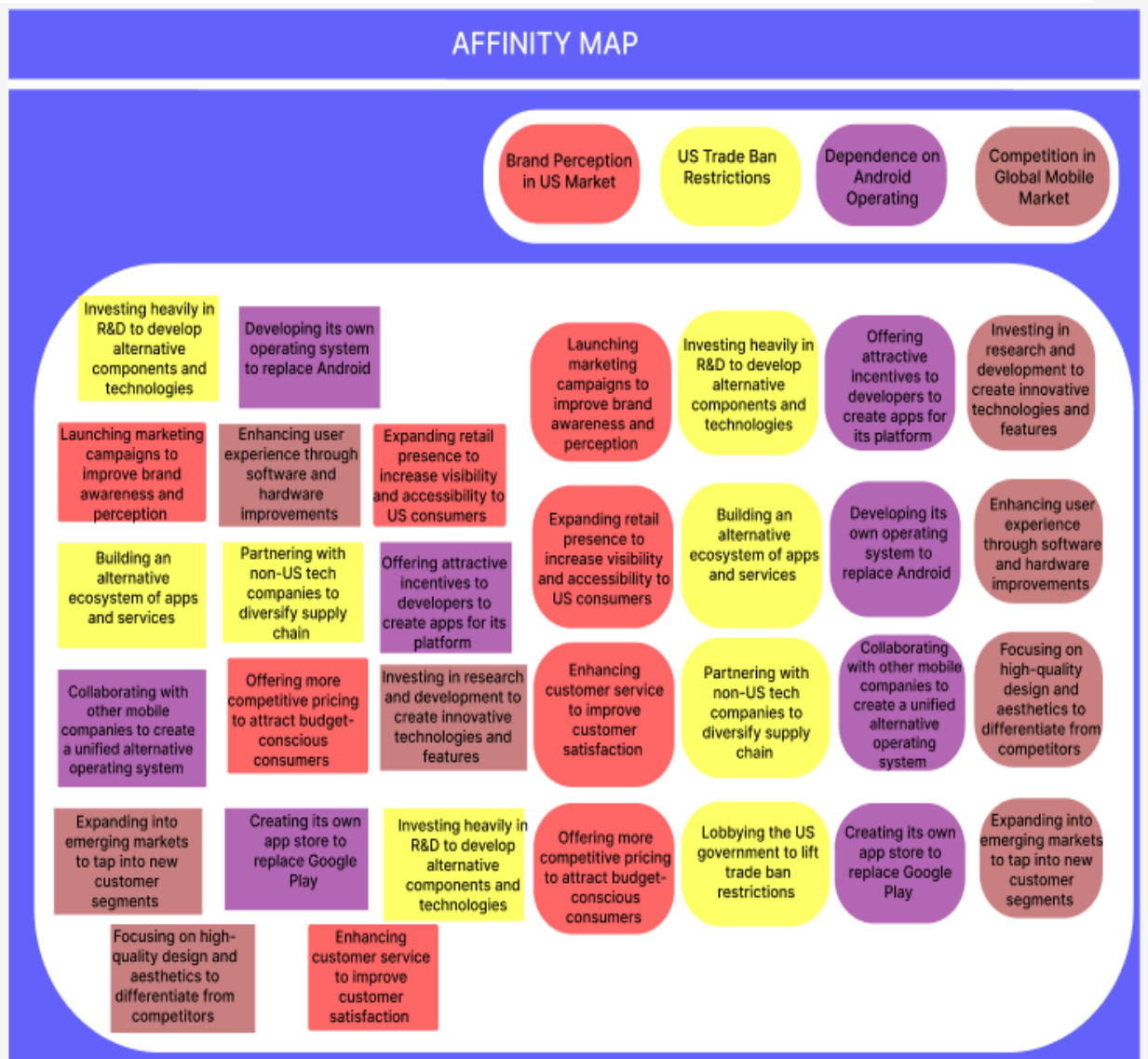


Huawei Mobile Business can identify the most important issues and opportunities and then rank them according to their likelihood of occurring and practicality using a prioritized map. By capitalization on the most promising innovations and increasing the likelihood of success, this strategy can direct the innovation process.

Affinity Map

Huawei can find trends and insights from a lot of data, like feedback from customers or market research, by using an affinity map. Huawei can find significant topics and prospects for development and problem-solving by arranging and grouping associated concepts.

Figure 16 :Affinity Map



Idea Evaluation

The Huawei Corporation evaluates concept ideas to determine the viability, impact, and potential of new product concepts. This assessment considers the possible market success, practicality, and effects on customers and businesses. Huawei wants to develop fresh concepts and launch new goods that will set it apart from rivals and satisfy consumer demand.

Figure 17 Idea Evaluation

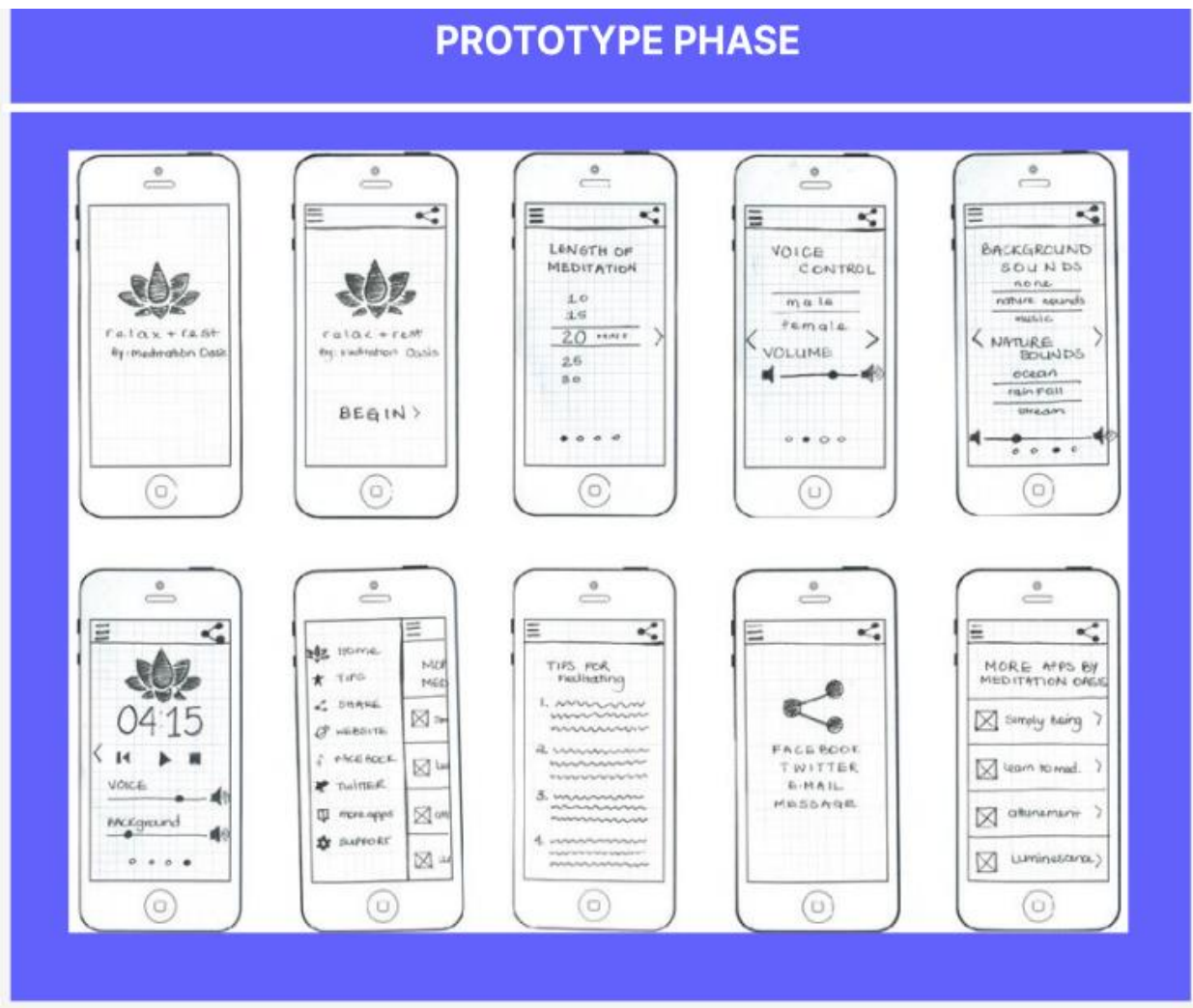
IDEA EVALUATION					
EVALUATION CRITERIA	IDEA A	IDEA B	IDEA C	IDEA D	IDEA E
Customer Impact	Unique experience, convenience of tablet and smartphone in one device	Interactive and immersive experiences	Appeal to eco-conscious consumers	Secure and transparent platform for managing data and transactions	Access to latest smartphone models and features without purchasing new device
Business Impact	Differentiation from competitors, new revenue stream, attract tech enthusiasts	Stand out from competitors, new revenue streams, strengthen brand image	Differentiation from competitors, enhance brand image	Differentiation from competitors, new revenue stream, enhance brand image	New revenue stream, increase customer loyalty, differentiation from competitors
Potential Improvement	New innovations in display technology, battery life, and user interface	New innovations in mobile user interface and applications	New innovations in materials, design, and energy efficiency	New innovations in mobile security, data management, and financial transactions	New innovations in mobile financing and customer service
Feasibility	Developing a foldable smartphone is feasible for Huawei, given the company's resources and expertise in developing advanced smartphones.	Investing in AR technology is feasible for Huawei, given its resources and expertise in mobile technology development.	Developing eco-friendly smartphones is feasible for Huawei, given its resources and expertise in mobile technology development.	Developing a blockchain-based smartphone is feasible for Huawei, given its resources and expertise in mobile technology development and blockchain technology.	Launching a subscription-based smartphone upgrade service is feasible for Huawei, given its resources and expertise in mobile technology and customer service.
Innovativeness	Differentiates from competitors, unique foldable design	Emerging technology, demonstrates commitment to innovation	Appeals to growing segment of eco-conscious consumers	Unique and secure mobile experience	Unique and convenient mobile experience.

Prototype Phase

Prototype

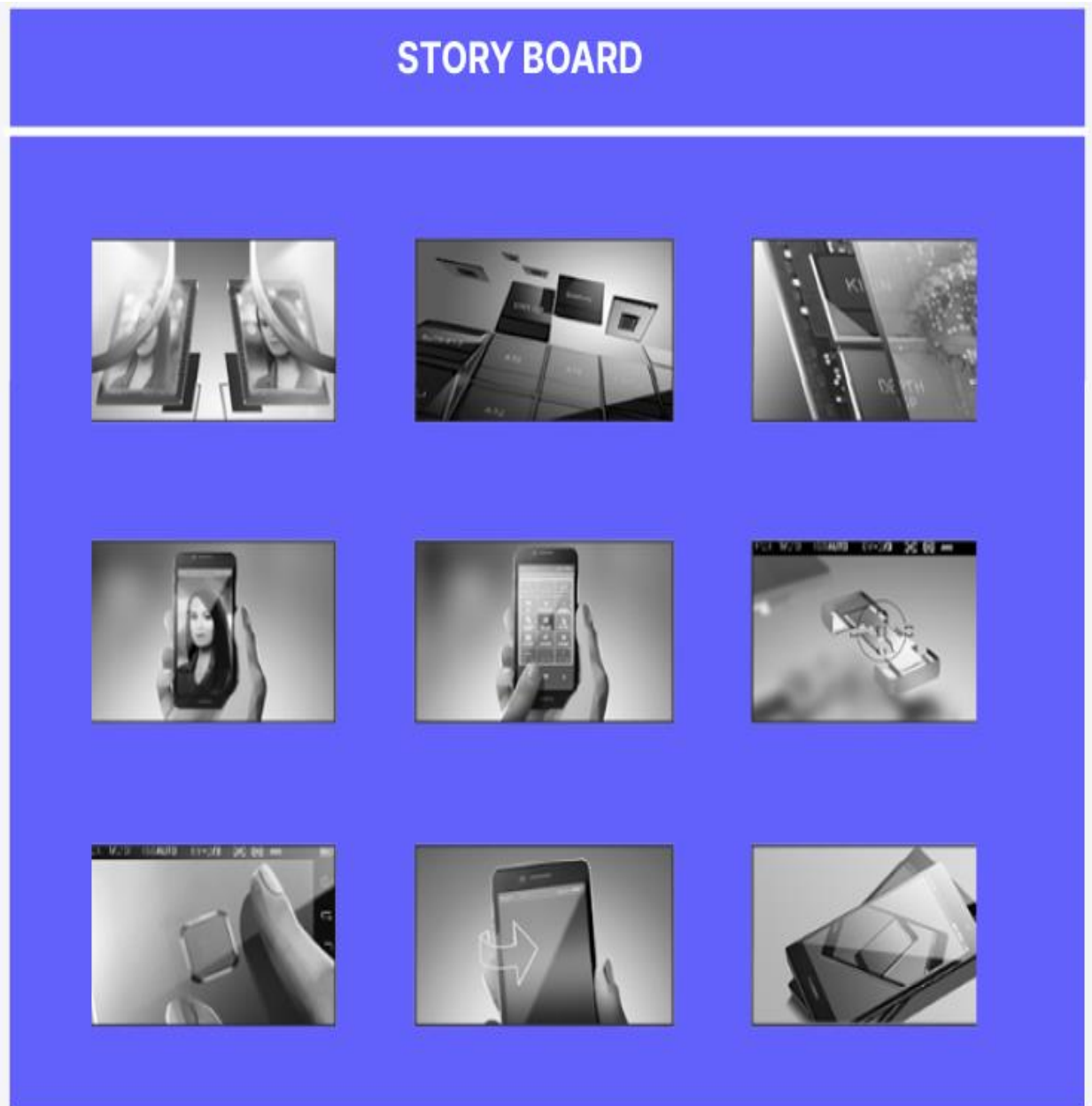
The Huawei Corporation assesses concept ideas to gauge their likelihood of success, significance, and possibility as new product ideas. This evaluation considers the likelihood of commercial success, viability, and effects on consumers and enterprises. To differentiate itself from competitors and meet consumer demand, Huawei seeks to create novel ideas and introduce new products.

Figure 18 Prototype Phase



Storyboard

Figure 19 Story Board



Test Phase

Feedback Capture grid

Figure 20 : feedback Capture grid

FEEDBACK CAPTURE GRID	
LIKE <p>The design of Huawei mobile phones is sleek and modern, with high-quality materials used in construction.</p> <p>The cameras on Huawei phones are known for their excellent quality and high-resolution images.</p> <p>The EMUI (Emotion UI) software on Huawei phones is intuitive and user-friendly.</p>	WISHES <p>While Huawei phones have a strong reputation for their camera quality, there is always room for improvement in terms of low-light performance and image stabilization.</p> <p>It would be great if Huawei offered more customization options for the EMUI software, allowing users to personalize their phone even further.</p> <p>Huawei could improve its customer service and support options to better assist users who experience technical difficulties.</p>
IDEAS <p>Huawei could offer more environmentally-friendly options for its mobile phone packaging and materials.</p> <p>It would be helpful if Huawei offered more built-in accessibility features for users with disabilities.</p> <p>Huawei could consider partnering with popular apps and services to provide exclusive features or discounts for Huawei phone users.</p>	QUESTIONS <p>How does Huawei ensure the security and privacy of user data on its mobile phones?</p> <p>Will Huawei continue to have access to Google apps and services on its future mobile phones, or will it develop its own alternatives?</p> <p>How frequently does Huawei release software updates for its mobile phones?</p>

To better future product creation and satisfy consumer needs, the Huawei mobile corporation employs feedback capture forms to obtain information from users regarding their encounters with their goods and services.

Observer's Note

Figure 21 : Observer Feedback Note

OBSERVER'S ON FEEDBACK OF HUAWEI Y6'S	
CUSTOMER PROFILE/BACKGROUND	
<ul style="list-style-type: none">• Hari Shah, 28• Software Engineer, Married• Interested in new brand Mobiles and with more features	
PROS OF CONCEPT/PROTOTYPE	CONS OF CONCEPT/PROTOTYPE
<ul style="list-style-type: none">• Ultra power saving mode is more better• Long time battery capacity• Affordable by everyone• More features	<ul style="list-style-type: none">• Hari Shah, 28• Software Engineer, Married• Interested in new brand Mobiles
OTHERS FEEDBACKS	
<ul style="list-style-type: none">• Huawei should add more ram with affordable price mobile and should increase camera quality	

Prototype Evaluation

Overall, Huawei's strategy of generating more reasonably priced smartphones with high-end characteristics has the potential to positively impact customers, improve business operations, and position the company as an innovative leading company. The idea's viability makes it a viable scheme for Huawei to continue pursuing in the future.

Figure 22 : Prototype Evaluation

EVALUATION CRITERIA	IDEA A	IDEA B
Functionality	Prototype A performs its intended functions effectively, with no major technical issues detected during testing. It has a high-quality camera, long battery life, and good performance. Overall, the functionality of Prototype A is excellent.	Prototype B performs its intended functions effectively, but there are some minor technical issues detected during testing. The camera quality is good, but there are some glitches in the performance, which need to be addressed before the product is launched.
Cost	The cost of Prototype A is reasonable, given its high-end features and quality materials. It is priced in line with its competitors, which suggests that it should be competitive in the market.	The cost of Prototype B is higher than its competitors, which could be a disadvantage in the market. Given the minor technical issues, the higher cost may not be justified.
Aesthetics	Prototype A has a modern and sleek design, which should appeal to its target market. The materials used are of high quality, which gives the prototype a premium feel.	Prototype B has a unique design, which could appeal to a niche audience. However, the materials used are of lower quality than those of Prototype A, which makes it feel less premium.
Usability	Prototype A is easy to use, with an intuitive interface and well-placed buttons. Testers did not report any major usability issues, which suggests that it is user-friendly.	Prototype B has a unique interface that could be confusing to some users. Testers reported some usability issues, which suggests that it may not be as user-friendly as Prototype A.
	The maintenance requirements of Prototype A are minimal, with no major issues reported during testing. It is built to last and should require only routine maintenance.	The maintenance requirements of Prototype B are higher than those of Prototype A, due to the lower quality materials used in its construction. It may require more frequent maintenance to keep it functioning properly.

Impact of Design Thinking in Huawei Mobile Company

As it focuses consumer, empathy, and creative problem-solving, design thinking has most probably had a massive effect on Huawei mobile company. Huawei might have been capable of creating more inventive as well as user-friendly products which successfully serve customer needs and preferences by prioritizing these principles.

Figure 23 : Impacts of Design Thinking

USER-FOCUSED APPROACH	AGILE DEVELOPMENT	RADICAL INNOVATION	COLLABORATIVE CULTURE
Design thinking's user-centered approach can help Huawei create products better suited to the market, identify new opportunities, and overcome the technological limitations caused by the US trade ban through partnerships and research and development.	Adopting an agile development approach that prioritizes user feedback and collaboration can help Huawei quickly adapt to changes caused by the US trade ban. By constantly iterating and improving their products and services, Huawei can stay ahead of their competitors and better meet the needs of their customers.	Radical innovation may be necessary for Huawei to overcome the challenges posed by the US trade ban. By thinking outside of the box and developing entirely new technologies and solutions, Huawei can potentially disrupt the market and differentiate themselves from competitors. This approach requires a strong focus on user needs and a willingness to take risks and experiment with new ideas.	A collaborative culture within Huawei can be instrumental in fostering a user-focused approach. By working together across teams, departments, and with external partners, Huawei can share knowledge, resources, and insights to develop innovative solutions that meet the needs and preferences of their target users amidst the challenges posed by the US trade ban.

Critical Reflection on Achieved Achievement and Proposed Recommendations

Throughout the years, Huawei has grown into a leading global technology provider. But it has also been the subject of various debates and difficulties, notably with its purported connections to the Chinese government and data security fears. Huawei's technological and service contributions should be considered while thinking about the company's accomplishments. Several nations across the globe have adopted Huawei's 5G devices since the company is a pioneer in the field. The corporation has also spent substantially on R&D, and its innovations have helped push the telecoms industry and allied industries forward. Data security and espionage concerns have been a point of contention for Huawei. Huawei has been under fire for allegations that it has used its equipment to spy on governments and citizens of other nations; as a result, several countries have prohibited their usage out of worries for their citizens' personal information. Taking these issues into consideration when evaluating Huawei's offered suggestions would help guarantee that the firm will be responsible for its decisions. Suggestions may call for the corporation to be more open about its inner workings, undergo third-party audits of its data security procedures, and adhere to global norms in this area.

Reviewing Huawei's influence on society, as well as its accountability and obligation for safeguarding the security and privacy of its goods and services, is essential to a critical reflection on the company's accomplishments and offered solutions. In order to maintain its leadership position in the digital sector and earn the respect of its stakeholders, Huawei must address their worries about data security and transparency.

Conclusion

In summary, Huawei mobile has benefited from the implementation of design thinking. By taking a customer strategy for product creation, the business has managed to design mobile devices that fit the individual demands of its users, resulting in greater customer happiness and loyalty. Huawei has been able to promote an innovative culture, expedite its manufacturing process, and set itself apart from its rivals thanks to design thinking. Huawei can also create a design thinking team that will be responsible for implementing this approach across all the company's business units. Huawei could preserve its position in the market and increase its market share as a result. In a quickly changing technological environment, the use of design thinking has offered Huawei with a significant instrument for remaining ahead of the competition and continuing to build creative products that satisfy the increasing requirements of its consumers.

References

Building a fully connected, Intelligent World. huawei. (n.d.). Retrieved February 25, 2023, from <https://www.huawei.com/en/>

Council on Foreign Relations. (n.d.). *Is China's Huawei a threat to U.S. National Security?* Council on Foreign Relations. Retrieved February 25, 2023, from <https://www.cfr.org/backgroundunder/chinas-huawei-threat-us-national-security>

Customer stories. Huawei Enterprise. (n.d.). Retrieved February 25, 2023, from <https://e.huawei.com/en/case-studies>

Huawei Marketing Gap Analysis. Cram. (n.d.). Retrieved February 25, 2023, from <https://www.cram.com/essay/Huawei-Marketing-Gap-Analysis/PCWJ8EMYTU>

Huawei's culture is the key to its success. Harvard Business Review. (2015, June 11). Retrieved February 25, 2023, from <https://hbr.org/2015/06/huaweis-culture-is-the-key-to-its-success>