

Prepared by :
Thembela Ndesi

Supervised by :
Dr. Greig Krull

USER EXPERIENCE

USER EXPERIENCE OF A SOUTH
AFRICAN MEMBERSHIP-BASED
ORGANIZATION WEBSITE



User Experience of a South African membership-based organization website

Thembela Ndesi

**A research report submitted to the Faculty of Commerce, Law and
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requirements for the degree of Master of Management in the field of
Digital Business**

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ABSTRACT

When customers come to a company's website or digital platform, the platform only has seconds to influence them to continue to use the platform. Investing in User Experience (UX) optimisation is essential to gain loyalty, brand visibility, and ensure customers return. Businesses that recognise the value of UX understand the importance of providing memorable experiences to their users and believe in creating long-lasting relationships with them. However, while UX should be at the core of every digital product or service, there are many businesses that do not invest in the UX. Furthermore, a website plays a key role in how an organisation interacts with its members. Therefore, the research purpose was to explore the current User Experience (UX) for the digital platform of a membership-based entity in South Africa. The research offers a case study of "The Drone Council South Africa". The aim of the study was to evaluate and improve member's digital experiences of using the website, with a view to increase and sustain membership by offering a member-centric user experience. The study provided an adapted theoretical framework that considers the user experience and how it can be evaluated. The framework brought together relevant concepts to address the study's objectives, such as UX, UX strategy, emotional design, benchmarking evaluation and membership-based models. A qualitative research study using semi-structured interviews was conducted with a sample group of 16 participants, made up of members and staff of the organisation. Thematic analysis was used to identify themes in the data analysis. The UX was evaluated according to usability, trust/credibility, appearance, and loyalty. The research findings point to a large gap between member expectations and what the organisation's digital platform currently provides. The data revealed that 75% of interviewed members are dissatisfied with the current service and are undergoing a poor user experience. Meeting the expectations and needs of users is required for an organisation to succeed. Therefore, the study proposes a high level UX strategy for the organisation's website with the aim of increasing and sustaining membership as well as reducing the customer experience gap between members and the organisation's website.

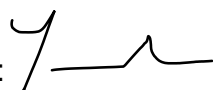
KEYWORDS

User Experience (UX), UX Strategy, UX Design, User-Centred Design Canvas (UCDC), membership-based entities, Digital platforms.

DECLARATION

I, Thembela Ndesi, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Management in the field of Digital Business at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

Name: Thembela Ndesi

Signature: 

Signed atWits University.....

On the21..... day ofFebruary..... 2023.....



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"YOU GAVE ME YOUR TIME , THE MOST THOUGHTFUL GIFT OF ALL"
DAN ZADRA

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LIST OF ACRONYMS

BMC	Business Model Canvas
CX	Customer Experience
DCSA	Drone Council of South Africa
DT	Design Thinking
LMC	Lean Model Canvas
NPS	Net Promoter Score
UAV	Unmanned Aerial Vehicles
UCDC	User-centred Design Canvas
UX	User Experience
RPAS	Remotely Piloted Aircraft Systems
SUPR-Q	Standardized User Experience Percentile Rank Questionnaire
SUS	System Usability Scale

CHAPTER 1. INTRODUCTION

1.1 Statement of purpose

The research purpose is to explore the current User Experience (UX) for the digital platform of a membership-based entity in South Africa. The research offers a case study of “The Drone Council South Africa”. The approach of the study is to evaluate and improve member’s digital experiences of the entity’s website, to increase and sustain membership by using a member-centric user experience.

1.2 Background of the study

Meeting the expectations and needs of users is required for businesses to succeed. South African businesses are recognising that an in-depth understanding of their user’s needs is especially crucial to constructing a successful service. This is especially complex in South Africa, with cultural diversity, socio-economic challenges and 11 official languages. With more and more South Africans conducting business interactions online, users anticipate an optimised user experience as a fundamental prerequisite, therefore, it is essential that all platforms and devices are accessible and user friendly (Paunovic, 2017).

A UX strategy is the rationale behind a product or service and is the heart of the UX process. It embodies the plan, principles, and approaches that form the way a team or individual creates a product or digital experience (Fard, 2022). The Founder and CEO of the Intechnic Corporation, Andrew Kucheriavy (as cited in LeSuer, 2022) notes that organisations like to focus on accessibility and user friendliness when it comes to UX. However, Kucheriavy (as cited in LeSuer, 2022) believes that what is even more important is the effectiveness of the product or service. Ensuring that the product or digital experience is not only accessible but is also useful is at the centre of every good UX strategy. In a digital world, a UX strategy is not only a way to have an advantage over competitors, but a crucial part of a product’s success (Fard, 2022). A concrete UX strategy acts as a

framework for design selections and decisions (Fard, 2022). South African companies have a chance to influence their businesses to be more effective by instigating engaged UX strategies throughout their digital network (Paunovic, 2017). However, Isbister and Hodent (2022) explain that a UX mindset/culture is only achievable if the entire organisation is on board and comprehends what it entails. Membership-based entities or organisations can therefore more efficiently support their members and potentially attract new members through a clear UX strategy (Paunovic, 2017).

1.3 Research problem

South Africa was one of the first countries to create drone industry regulations. Sam Twala, Director of Ntsu Aviation (as cited in Ginindza, 2022, para. 2), confirms this by saying “We were the first country in the world to promulgate comprehensive drone regulations, and we lost the opportunity to sustain that by not continuing to innovate and stay ahead of the curve”. Yet, several countries in Africa have now surpassed South Africa in terms of the development and implementation of drone technologies. Although South Africa was the first country to approve Remotely Piloted Aircraft Systems (RPAS) regulations, Kenya, Ghana, and Rwanda have created regulations to ease the rollout of drones and now South Africa is playing catch-up (Phenyane, n.d.). To counter these problems, the Drone Council South Africa (DCSA) was established in 2019, as a drone industry body consisting of ten chambers (Phenyane, n.d.).

The Drone Council South Africa (DCSA) originated “as an industry response to create a platform of affiliation by the various established companies and new entrants into the industry” (Phenyane, n.d., para. 1). It is a membership-based entity with the aim to empower its members. The Council’s main objective is to organise its members and other stakeholders to augment the rapid development of the drone economy in South Africa (Phenyane, n.d.). To achieve their objectives, the Council needs to increase membership to reach those goals. The Council’s website and social media presence is used to provide information to prospective members. However, it is not clear how the Council engages with their

members through their digital platforms and how the Council attracts new members and retains existing ones. According to Hudson (2021), membership organisations exist to serve their members, but this does not always translate to engagement on their digital platforms. For example, when it comes to marketing and sales, many organisations may not consider UX, and organisations can lose out on leads and revenue because their websites have major UX issues (Kaplan, 2020). Therefore, it is important for organisations to consider aspects such as usability, value, efficiency, and accessibility to ensure end users have a positive experience to increase and sustain membership and grow their business (Kaplan, 2020).

There are several additional issues to explore regarding the UX design of membership-based entities. For example, Nicole Barbuto, a project strategist (as cited in Ebner, 2020), highlights a common issue where membership-based organisations try to target as many prospective members as possible with the same strategy simultaneously. Barbuto (as cited in Ebner, 2020) suggests that a better UX strategy would be to offer digital experiences that meet the desires of individual membership subcategories. The research problem to address in this study is how to increase and sustain the membership of a South African membership-based entity through its digital platform. The DCSA will be used as a case study. To address this problem, the study will investigate the current UX of the entity's digital platform (website) to improve the user experiences of prospective members and members.

1.4 Research objectives

This research aims to evaluate the UX for the digital platform of a South African membership-based entity. The DCSA will be used as a case study to investigate how UX design can support the increase and sustainability of the members for the organisation. The aim is to evaluate the extent to which a member centric UX can improve the online experiences of prospective members and members. Therefore, the study is based on the objectives below:

Objective 1: Evaluate the current UX of the digital platform (website) of a membership-based entity in South Africa.

Objective 2: Propose a high level UX strategy for the digital platform (website) of a membership-based entity in South Africa to recommend a more intuitive user experience for members and prospective members.

1.5 Rationale

The DCSA is a membership-based entity and membership organisations exist to serve their members. Adopting a member-centric approach to the User Experience (UX) of digital platforms can increase attraction and retention rates (Hudson, 2021). A member-first approach is fundamental for a membership organisation to develop, engage and keep existing members. The objective should be to offer a digital platform that is entirely optimised for members and their necessities (Hudson, 2021). The DCSA was established in 2019 to serve and promote a new industry in South Africa, therefore it is imperative that its digital platform support's the Council's aims and objectives. However, in initial discussions with employees in the Council it does not appear that the Council has a clearly defined UX strategy.

An independent study was done on two non-profit membership-based websites, United Nations International Children's Emergency Fund (UNICEF) and Red Cross. The study found that a well-designed user experience can influence consumer behaviour to be more charitable and increase online conversion (Ralston, 2014). Therefore, this study highlights that good user experience can have a positive influence on membership-based websites and can lead to increased leads, conversions, and revenue. Very little literature was found that showcased examples of improving the UX for membership-based entities, which is a potential gap in the literature that this study aims to contribute towards. The digital world is now more complex than ever, to stay relevant, membership organisations need to acquire and retain members (Bloor, 2021). Yet, Bloor (2021) notes that membership organisations struggle to gain new customers or

find it challenging to keep them. The priority for membership organisations is membership engagement. It is therefore necessary to dedicate time to a digital strategy and have a well-defined understanding of the target audience (who the members and prospective members are). Membership organisations must also take a value-driven approach to communications, so that existing members see value in renewing their membership with the organisation (Bloor, 2021).

1.6 Delimitations of the study

The delimitations of this study are as follows:

- The study is delimited to the area of the UX strategy and UX Design of the digital platform (website) of the membership-based entity. Other platforms and forms of membership attraction and retention or parts of the organisation are not considered. The web development of the website is also outside the scope of this study.
- The focus of the study is on the UX strategy of the membership-based entity's digital platform (website). It will not consider broader digital strategies such as digital transformation and social media strategies.
- The study uses a case study approach by focusing on one membership-based entity in South Africa. The digital platforms of other membership-based entities are not explored.
- The study focuses on the evaluation of the current UX and to propose a high-level UX strategy based on the evaluation, it does not aim to implement any revised UX design considerations or recommendations nor measure the impact of any recommended changes.

1.7 Definition of terms

The most significant terms for the research are defined as follows:

- Drones or Unmanned Aerial Vehicles (UAV) - unpiloted aircraft or spacecraft (Howell, 2018).

- Membership-based entity - an organisation using a business model in which the organisation “provides a product or service on a monthly or yearly basis” to paid members (Ramvani, 2019, para. 5).
- User Experience (UX) - how a human being feels when interacting with a digital product or system (Gube, 2010). For instance, a website or app.
- UX Strategy - The rationale behind a product’s design and the heart of the UX process. It embodies the plan, principles, and approaches that form the way a team or individual creates a product or digital experience (Fard, 2022).
- User-Centred Design Canvas (UCDC) - UCDC is based on a user-centred approach and places the users at the heart of the process and centres on how best to serve user’s needs and the business goals (Zawadzki, 2016).
- SUPR-Q - an 8-item questionnaire purposely designed to evaluate the overall “quality of the website user experience” (Sauro, 2018).

1.8 Assumptions

The research is underpinned by the following assumptions:

- It is assumed that there is a relationship between the user experience and the likelihood of becoming or remaining as a member of the membership-based entity. The expected results of the study regarding enhancing user experience are expected to positively affect membership.
- It is also assumed that the membership-based entity will continue to use a membership subscription model. This will likely influence the design of the digital platform and the form of engagement with members.

1.9 Chapter Outline

The following chapter (Chapter 2) reviews the relevant literature in the area of UX design and UX strategy as well as the frameworks and concepts that align crucial aspects of the study to the research. The methodology of the research (Chapter 3) follows where the data collection and analysis processes are discussed. The

findings of the data collected will be laid out in the next chapter (Chapter 4) and then a detailed discussion about the findings is reviewed against the literature (Chapter 5). Lastly, the final chapter (Chapter 6) presents a summary and conclusions of the findings and recommendations from the UX study as a whole.

CHAPTER 2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

This research aims to evaluate the UX for the digital platform (website) of a South African membership-based entity. This chapter therefore considers what is meant by UX and benchmarking UX, what considerations are required for a UX strategy and the relevant UX metrics for a membership-based entity. The relevant literature is reviewed, and an analytical framework is provided to situate the study in the context of previous research in this area and the concepts that can affect user experiences when using digital platforms.

The following literature sections are focused on reviewing the fundamental components that need to be considered to evaluate a UX. UX design processes will be discussed pertaining to emotional design, which will consider how to produce a design that stimulates emotions that result in good user experience. This is followed by a review of how to evaluate the user experience. To meet member's needs, membership models will be reviewed to determine the significant features that can deliver a member centric user experience. As the UX strategy needs to align to the business strategy, a model canvas will be considered to align the organisational goals and the UX.

2.2 Member-Centric UX Design

The following section briefly reviews the literature in terms of member-centric user experience and UX design principles and processes. The importance of a member-centric user experience will be discussed, and the methods used to deliver value to members by appealing to rational and functional value. Emotional design will be considered as one of the components that can move organisations towards a more member-centric user experience.

2.2.1 *The Importance of a Member-Centric User Experience*

As this research explores the UX design of the website of a membership-based entity, it is important to consider a member-centric user experience. Having a membership-first approach is vital for a member organisation to develop, engage and keep existing members (Hudson, 2021). It is important that a membership organisation adopt a member-centric user experience because it places the users at the heart of UX design and development (Hudson, 2021).

There are a variety of value drivers to design a membership offering that delivers rational and emotional value (Heather & Kogan, 2020). Rational value is defined as appealing to functional, practical, or physical endurance of a product (Sheth, Newman & Gross, 1991, p. 160). Emotional value is defined as appealing to arouse feelings or sentimental, emotional states of a product (Sheth et al., 1991, p.161). Emotional value is less measurable but equally powerful because it creates an honest connection that produces sustained commitment and loyalty (Heather & Kogan, 2020). Rational value includes aspects such as cost, convenience, incentives, and rewards. These are significant in membership because they offer rational, straightforward value (Heather & Kogan, 2020). However, because performance and durability are prevalent in many industries, it is harder to differentiate, which leads to high competition and sustainability challenges. Emotional value can be represented through identity, community, and experience (Heather & Kogan, 2020).

Some businesses have struggled with business performance regardless of maintaining high-tech capabilities (Kato, 2021). This is because the foundation of competitiveness is moving from rational value (performance and endurance) to emotional value (design and user experience) (Adams, 2012 & Noble & Kumar, 2008, as cited in Kato, 2021). For instance, the electric vehicle Tesla has the highest record of customer approval for all car brands (Duckler, 2020). Tesla's elevated levels of customer approval are then converted into high levels of customer loyalty because Tesla's extended reach and appeal is beyond their

electric vehicle as a symbol of hope for a more sustainable environment, showcasing emotional value (Duckler, 2020).

Organisations are shifting “from the interest of functionality and intent on emotional value because it builds strong loyal” relationship with customers (Noble & Kumar, 2008, as cited in Kato, 2021, p. 1). “However, the movement to focus on creating emotional value is still in its nascent stages” (Kato, 2021, p. 1) with very limited studies. Kato (2021) argues that unless the influences or outcomes are evaluated under the same circumstances, “it cannot be asserted that emotional value is more important than functional value” (p. 1). Functional value is still significant because without those tangible benefits of performance and durability, the product will not be acknowledged by consumers. However, memberships that address multiple aspects, particularly those that produce both rational and emotional value will be especially effective. The amalgamation of rational and emotional value has proven powerful in both customer experience and membership proposition (Heather & Kogan, 2020).

2.2.2 Emotional Design

Emotional design considers “how to generate design that induces or arouses emotions which result in good user experiences” (Norman, 2004). Norman (2004) proposes three stages of user experiences which can be affected by three different levels of design, so that users develop positive associations with an organisation brand or product. There are three levels:

- **Visceral:** The visceral level of design is concerned with exterior aesthetic or visual look. When designing at this stage the designers should consider the user’s state of mind, opinions, and feelings (Norman, 2004).
- **Behavioural:** This stage of design, the users are more interested with the serviceability of the design, thus, detail in functionality is key in making sure that users are effortlessly led to their end goal (Norman, 2004).
- **Reflective:** After using a product, users will evaluate its functionality, advantages, usefulness, and value for money. This is where the user will

resolve to continue to use the product or select an alternative or similar product (Goonawardene, 2021).

According to Goonawardene (2021), when these three levels are working in synchronisation it provides a good user experience for the user. “Emotional design is the key to a good user experience, and this has the power to make sure that the user will keep on using the product for a long time” (Goonawardene, 2021, para. 20).

In addition to Norman’s (2004) levels of design, Walters proposed a hierarchy of emotional design which is adapted from Maslow’s Hierarchy of human needs. Walters (as cited in Ritter & Winterbottom, 2017, p.62) argues that a digital product’s design must be primarily practical first, before it can be dependable or operational, and most products are missing the highest level of enjoyment because the user’s necessities are not fulfilled. This hierarchy highlights four levels of emotional design (Ritter & Winterbottom, 2017, p.62):

- **Functional:** users should be able to finish tasks.
- **Reliable:** the product should be reliable.
- **Usable:** users should be able to perform basic tasks speedily.
- **Pleasurable:** using a product or service should be satisfying and enjoyable.

2.2.3 UX Design Process

Two processes guiding UX design are considered: Design thinking and Lean UX. According to Chen (2020), design thinking is a user-centred methodology for analysing challenges and seeking solutions for them. Rather than skipping to abrupt solutions, design thinkers challenge assumptions and ask questions to reveal the literal problem (Chen, 2020). Design thinking is a “human centred approach to invention that pulls from the designer’s toolbox to incorporate the necessities of people, the potential of technology, and for business” (Lewrick, Link & Leifer, 2020, p. 20). Design thinking requires a diverse way of looking at the world to see the potential in the unimaginable, to make networks that were

not assumed of before and to seek solutions for a problem. Design thinking puts the customer first when developing innovative products and services (Dekker, 2021). The emphasis on people and the potential user of a solution is a crucial component of design thinking (Lewrick et al., 2020). Design thinking concentrates interest in the understanding of the user needs and the solving of problems (Lewrick et al., 2020). Design thinking requires regular cooperation between the users and stakeholders to guarantee that the solution targets the intended objectives (Chen, 2020; Sharlip, 2019). Design-thinking is a human-centred, adaptable process that is concentrated on building empathy of what users feel, think, and do. Most importantly design thinking involves stakeholder collaboration, including designers and users (Malviya, 2020).

In summary, the advantages of design thinking are that it is user-centred, collaborative, inquiry-based, iterative, tests its products and is adaptable. However, according to Kimbell (2011, p. 289), the disadvantage of design thinking is that although the user is at the heart of the design the “emphasis is still on the designer as the main agent within the design”. There are five stages of design thinking. Each stage embodies principles of design thinking: reframing of the problem statement, empathising with the end users, embracing the chaos during ideation, iterating with prototyping and, finally, testing the proposed solution (Lal, 2021). “Each stage emphasizes risk-taking and continuous prototyping that leads to innovation but also combines with business objectives” (Verhulsdonck et al., 2021, p. 2). For example, design thinking has driven innovation that has led to new methods and approaches that are more user-centred such as incorporating free return policies by e-commerce businesses to create more satisfied customers (Verhulsdonck et al., 2021). Figure 1 provides an overview of the phases involved in a design thinking approach.

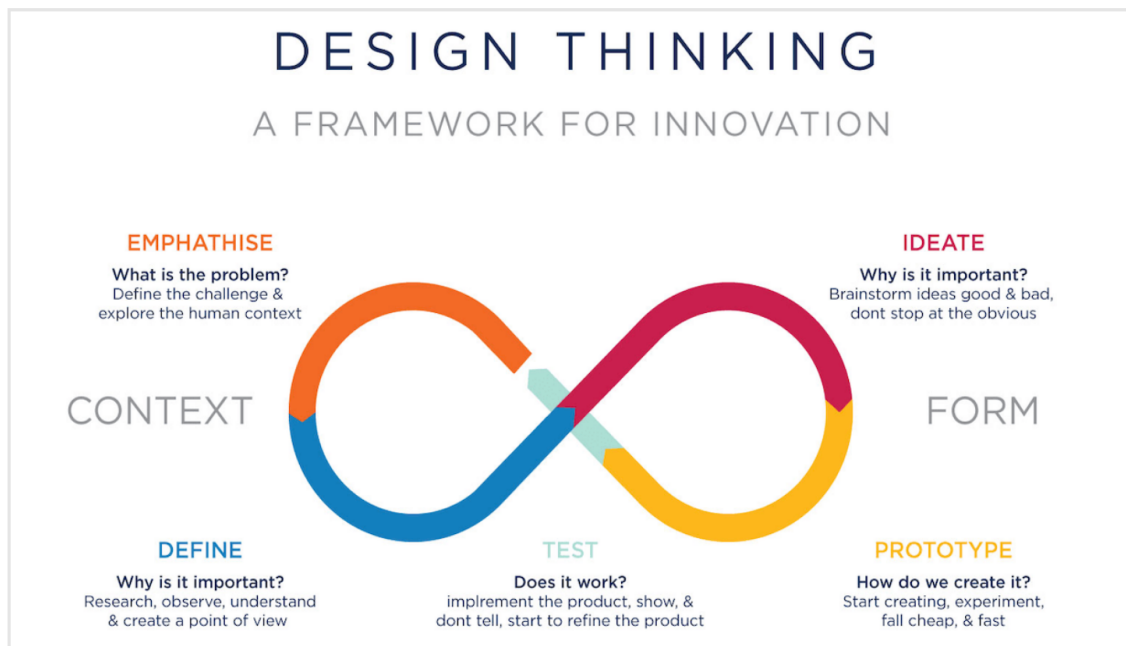


Figure 1: Design thinking framework (Chen, 2020)

Design thinking focuses on a human centred approach to problem solving by using five stages to research the user's needs, iterate on prototypes, test the products with users and use the feedback from users to improve the product. Another common design process is "Lean UX". Lean UX focuses on "bringing the true nature of a product to light faster, in a collaborative, cross-functional way that reduces the emphasis on thorough documentation while increasing the focus on building a shared understanding of the actual product experience being designed" (Gothelf, 2013, p.7). Lean UX is underpinned by Design Thinking and Agile development philosophies, where the objective is to make something in the fastest way achievable and in the shortest timeframe with the maximum value that users will use and buy (Gothelf, 2013). The benefits of Lean UX are that it is an iterative process, a collective process, an expedited process and a user-centred process. Reflection is an important component after each cycle in the iterative process (Malviya, 2020). It works on evidence after each cycle and can make something fast as possible with a minimum waste of resources. However, according to McMurray (2019), the disadvantage is that while Lean UX does involve some user research it makes too many assumptions about the user and can end up wasting resources

building a product that users do not want. Furthermore, Lean UX focuses only on user testing and does not expand on how to involve other elements such as problem inspections, ideation, development and user assessment (Gowtham, 2018). The Lean UX model follows a three-phase cycle (Gothelf & Seiden, 2016; Malyvia, 2020):

- **Thinking:** Create a hypothesis and finds an efficient and quick way to validate that hypothesis.
- **Making:** The best way to validate is to build the smallest possible thing that will help ascertain whether the hypothesis is true. This process uses the minimum viability of a product that is built using wireframes, mock-ups, or working prototypes.
- **Checking:** In this phase, what has been built is tested with users in real-time, where users are monitored using the product and they provide feedback. The objective of this phase is to ascertain, whether a feature/product is likely to prosper before committing to entirely construct it (Malyvia, 2020).

2.3 Evaluating User Experience Design

This section will consider the most common and most effective constructs used to measure the quality components of the user experience of a digital platform. According to Sauro (2015b), one of the most efficient ways to gauge the perceived user experience of a digital product or service is to measure it against the four most common digital quality components: usability, trust/credibility, appearance, and loyalty. This section will discuss each quality component and the constructs each of them employs to evaluate the quality of the user experience.

2.3.1 *Usability*

Usability is related to how easy it is to use a website and is regarded as a significant aspect on the advancement of electronic commerce (Davis, 1989 & Flavián et al., 2006, as cited in Casalo, Flavian & Guinaliu, 2008). Usability is also a measure of how simple it is for a user to complete a task with a product/design to achieve the defined objective successfully, efficiently, and adequately (Schroeter, 2021). From the user's point of view, usability is essential because it can help the user to complete the task correctly, and users can operate with a pleasant disposition. If a website is hard to use, or if users get confused or lost on the website or if information is difficult to read, they simply leave (Nielsen, 2010). The quality components that make up usability are (Nielsen, 2010):

- **Learnability** - the extent that customers can complete a specific task and achieve a particular objective accurately and entirely in a brief time and for the first time.
- **Efficiency** - the user must be able to learn how to operate a system as quickly and easily as possible.
- **Memorability**- how well users can recall different functions after a period of not using the site.
- **Errors** - the amount and severity of errors both from the site and the user.
- **Satisfaction** - the gratification the user gets from using the website.

2.3.2 *Trust/Credibility*

Credibility is defined as the authenticity or trustworthiness of information found on the web, which means the degree to which users believe the content in a website (Al-Omar, 2016, p. 356). Web credibility is a significant factor because it can enable users to interact with the website, disclose their sensitive information, and revisit the site. It can also increase user satisfaction, trust, loyalty and is particularly important for organisations that operate mostly online who rely on a substantial part of their membership being recruited through digital platforms (Al-Omar, 2016). Doncaster (2014, p. 89) argues that the key factors of credibility

that induce positive views about a website or online products include “how current the content is, safe load times, grammatical and/or spelling errors, transparency of information about the company and its key personnel”. Ritter and Winterbottom (2017) argue that humans develop trust and emotional connection through feedback. “The back-and-forth interaction creates trust; a negative feedback loop will break down trust and ultimately the emotional connection too” (Ritter & Winterbottom, 2017, p.62).

According to a usability study that Harley (2016) conducted to investigate differences in how websites are evaluated, the study revealed that the fundamental elements used to weigh trustworthiness and credibility are identical irrespective of the setting or culture. Nielsen (1999, as cited by Harley, 2016, para 2) provided four ways in which a website can convey trust:

- **Design quality:** The appearance feels professional and reliable. Clear navigation conveys respect for users and an unspoken promise of respectable service, while spelling mistakes, errors or problematic navigation conveys disregard for the users (Harley, 2016).
- **Up-front disclosure:** The website is transparent and discloses all information that speaks to customer experience. This includes contact information, additional fees or charges for goods or service and return policy and guarantees. It is important to be transparent and disclose information such as membership fees because users will be dissatisfied if, for instance, they only obtain that information after filling in a lengthy membership form (Harley, 2016).
- **Comprehensive, correct, and current:** Content and produce choice must be relevant and current. If a site has merchandise photos, it should have suitable shots of all merchandise. Unplanned or unsystematic content signals a weak service (Harley, 2016).
- **Connected to the rest of the web:** Linking to third-party sites or social media shows credibility. Secluded sites feel like they have something to conceal (Harley, 2016).

2.3.3 *Appearance*

In a study of web design visual principles, Affandy, Hussain and Nadzir (2018) reported that based on two distinct design principles (classic and expressive aesthetics) they found two key elements that web designers need to consider when designing the sites aesthetic components:

- **Attractiveness** - The attraction of the site is significant when planning the visual aesthetics of the sites. Attraction is necessary to appeal to the users to use the site. A site that is not eye-catching may result on the site being deserted by users (Affandy et al., 2018).
- **Clear presentation** - The visual design of the site, such as the content, fonts, and colours of the website must be clear. The colours used must communicate the brand of the organisation while avoiding being too opaque and the backdrop colour must juxtapose with the font colour. This is to guarantee that the communication and content on the site are clear (Affandy et al., 2018).

According to Thorlacius (2007), the most successful websites are those deigned where aesthetic aspects are in harmony with the following areas: sender image, functionality, genre, and target audience. The design of the layout of the website must be organised, must have ample space, and must not be jumbled. An overcrowded design may make it difficult to traverse the site for users (Affandy et al., 2018). There is a link also between website appearance and credibility/trust (Westerwick, 2013; Doncaster, 2014). The aesthetic look of a website is significant because it can affect the opinion of users concerning the quality of a site. However, many “questionable sources offer information on websites with an appealing design, which may signal high credibility through appearance” (Westerwick, 2013, p. 194). That which can be perceived instantly (such as colours, layout, images) has the capability to enhance credibility considerably. The use of “stock photos” or public domain imagery can have a negative effect on perceived credibility, while using “real” images can help communicate a sense of authenticity and legitimacy (Fogg, 2003, as cited in Doncaster 2014, p.89).

2.3.4 Loyalty

According to Garrett (2006), users become loyal because of the positive experiences the customer ultimately has with the organisation's product and/or service. A resonate brand creates an emotional association for the customer. Positive customer service brings an experience that makes the customer feel significant. Taylor et al. (2004) argue that customer loyalty (both behavioural and attitudinal) is positively connected to satisfaction, worth and resistance to change. Customer satisfaction has a positive and considerable effect on customer loyalty and "when consumers find things that exceed their quality, value and expectations, they will be more satisfied and loyal" (Barbosa et al., 2022, p. 246).

Garrett (2010) states that appearance and usability are important, but user experience has a superior influence on customer loyalty and a good user experience will bring customers back the second time. Customers who have good user experience are most likely going to be more loyal and become brand ambassadors (Canziba, 2018). The quality of the experience is an antecedent in the overall customer loyalty (Nichols & Chestnut, 2014) and satisfaction is also a significant antecedent to customer loyalty. "Investing time and resources into customer experience will help reduce churn and increase customer loyalty" (Canziba, 2018, p. 97). According to Nicholas & Chestnut (2014), most consumers feel more loyal to an app that offers a better user experience. Therefore, the more satisfactory the experience with the product or service, the probability is that customers are going to go on to use it again and recommend it.

2.4 UX Strategy

A good UX strategy will determine the plan for how users will be motivated in a digital space (Schaffer & Lahiri, 2013, p.12). For example, a digital platform cannot be created with the expectation that consumers will automatically use it. A plan is required that influences people into a digital relationship that persuades consumers to migrate to a new system (Schaffer & Lahiri, 2013, p.12). A solid UX

strategy provides a better opportunity for community acceptance and reaching the goals of the digital platform. Hoekman (2015, as cited in O'Donoghue, 2017) suggests that a UX strategy is a plan or document that drives decisions. It does not define UX qualities but identifies specific goals. A UX strategy should create a shared vision but be simple enough to aid in design decisions (Hoekman, 2015, as cited in O'Donoghue, 2017). The following sections review the considerations for creating a UX strategy and the alignment of the UX strategy with the business model.

2.2.2 Creating a UX Strategy

There are crucial elements that work in synchronisation that need to be considered to build a solid UX strategy. Importantly this strategy needs to align to the business strategy. Levy (2021) expresses that a well-designed UX strategy is a means to shift or bring change to the business ecosystem. To realise this advantage, Levy (2021) proposes a framework to create a cohesive UX strategy that is based on four tenets. Therefore, when creating a UX strategy, these tenets need to be understood (Charuka, 2020). A UX strategy framework is founded on the following four tenets (Levy, 2021):

1. **Business strategy:** These are the organisation's leading ideologies, the competitive edge, economic gain, and business goals.
2. **Value innovation:** The goal is to bring real value to customers but simultaneously bring costs down for the company.
3. **Validated user research:** An organisation needs to understand their users and their challenges before attempting to solve the problem with design.
4. **Killer user experience design:** Once the other tenets have been attended to, the user experience can be designed using all the information gathered. The UX needs to align to the business strategy, value, and apply the user research in the design of the product or service.

2.2.3 Using the UX Model Canvas: Business Model Construction

A UX strategy is situated at the juncture between UX design and business strategy (O'Donoghue, 2017). Therefore, this section explores business model construction. A business model “describes the rationale of how an organization constructs, supplies and obtains value” (Osterwalder & Pigneur, 2010, p.14). The business model provides the “flow between key components of the company” (Blank, 2020, as cited in Levy, 2021, p.13). There are three popular model canvases that are used in organisations to help visualise what is important and to address key areas. The three model canvases may be used by organisations to generate a high level UX strategy. The specific model canvas that an organisation chooses must be based on the business structure. Table 1 provides an overview of the three main model canvases.

Table 1: Overview of Three Model Canvases

Canvas	Description
Business Model Canvas (BMC)	This canvas assists companies in creating their business model founded on nine building blocks. It adopts an agile approach of planning, authentication, and iteration as it is a “living document” that should be verified and occasionally given a “face-lift” (Amanullah et al., 2015, p.462). Created in 2005, it allows organisations to generate, supply and apprehend value (Levy, 2021). BMC was designed with start-ups in mind.
Lean Model Canvas (LMC)	The one-page business model for lean start-ups, was adapted from Alex Osterwalder's BMC by Ash Maurya who became concerned with risky assumptions in the BMC (Skowron, 2020). The model assists an organisation to identify the riskiest assumptions in their thought processes and then test the riskiest assumptions through a sequence of bite size rapid experiments (Maurya, 2016). The organisation then applies what they have learnt to distinguish the first iteration of their solution, or “Minimum Viable Product” (MVP), which is a prototype created with less expensive wireframes (Maurya, 2016).
User-centred Design Canvas (UCDC)	Inspired by both the BMC and the LMC, Leszek Zawadzki and Alina Prelicz-Zawadzka created a simpler and more effective tool to enable the user experience design process

	(Zawadzki, 2016). UCDC is unique because is heavily based on a user-centred approach and places the users at the heart of the process and concentrates on how best to serve user's needs and the business goals (Zawadzki, 2016).
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The theoretical underpinnings of the UCDC are rooted in user-centered design (UCD), which is a design philosophy and approach that places the user at the centre of the design process. UCD has its roots in the work of Norman and Draper (1986), who emphasised the importance of designing products that are easy to use and cater to the needs of the user. UCD has been further developed and refined by various scholars and practitioners, including Nielsen (1993), who outlined the principles of user-centred design in his work "Usability Engineering".

The key distinctions between the Canvas models in Table 1 is that LMC focuses on solutions to a problem, the BMC centres around persuading people to buy a particular product or service and the UCDC emphasises a user-centred design approach (Skowron, 2020). This study has selected the UCDC model as a model to aid the evaluation of the membership-based entity's UX of their website and for making suggestions for improvement of the UX design, aligned to the objectives of the study. As shown in Figure 2, the UCDC contains nine fields that represent groupings of data about the users and the business (Prelicz-Zawadzka, 2016).

The left side of the canvas is focused on the users and consists of problems, motives and fears. The right side of the canvas contains data about the business: solutions it proposes, substitutes that users have and competitive benefits that make it stand out in the market. The middle column of the canvas collects all the data: the business, the users and unique value proposition (Prelicz-Zawadzka, 2016). This canvas aids in understanding the target user, relating the business to the user and marketplace desires, determining the competitive edge, creating a unique value proposition, and enhancing the brand message strategy, which are all things a membership-based entity needs (Prelicz-Zawadzka & Zawadzki, 2016).

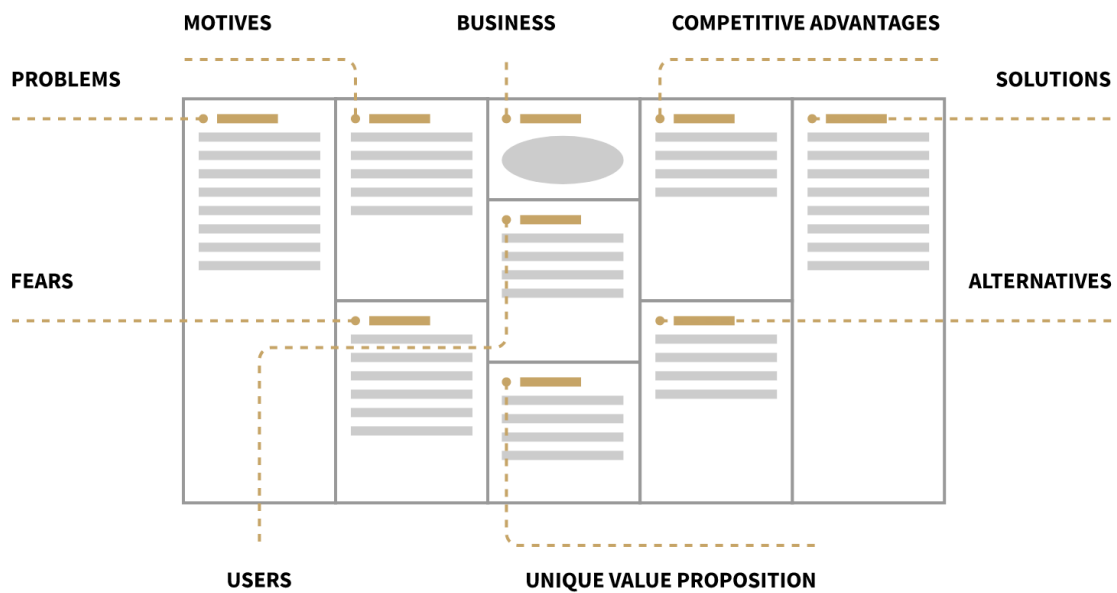


Figure 2: User Centred Design Canvas (Prelicz-Zawadzka & Zawadzka, 2016)

2.5 Membership Websites

The following sections review different types of membership models, the importance of a member-centric user experience and the most significant features that should be included in a membership website.

2.5.1 Membership Models

According to Ibele (2018), a membership model is a type of business plan where people pay a recurring payment to access a product or service. A membership model delivers the design for various membership levels, income sources, marketing undertakings, events, and finances. It leads to increased membership, better engagement, retention of members, high income growth and a greater percentage of punctual payments (Ibele, 2018). The membership model that an organisation uses must be based on the organisation's objectives and well-matched to their product or service. A membership model needs to meet the customer's needs, offer convenience and be reliable (Sandler, 2019). As shown

in Table 2, Morand (2021) and Sandler (2019) collectively identified six possible membership models:

Table 2: Overview of Membership Models

Model	Description
Continual Content Model	This is one of the most common types of membership models because its aim is to keep members for long periods of time for them to gain the benefits of being part of the site. This type of model may involve membership levels, or it might be an all-in-one subscription (Morand, 2021).
The All-in-One Subscription	This membership model requires members to pay a linear rate to have access to content every month (Morand, 2021). This model works well for memberships that are basic and make members pay a uniform amount because it allows the organisation to forecast income development by member growth (Morand, 2021).
Drip Model	A drip model requires members to pay once-a-month fee to get admittance to new content that is added every month. The appeal of this model is the fact that members are continually absorbed and engaged in new content which keeps them returning to the site. Drip membership characteristically works well with a once-a-month fee (Sandler, 2019).
The Freemium Model	This membership model gives members free access to content, products or services at a basic level before requiring members to sign up for a paid subscription for additional content or features. The strategy of this plan is that members on the free plan will see the intrinsic value of the product or service and switch to a paid plan when the trial or free plan comes to an end (Morand, 2021).
Product/service Model	This membership model is for organisations who offer a product or service for a short period or one time only. For instance, the product may be a portion of locked content, or a unique download accessible only by membership. The benefit of this membership is that organisations can persuade members to buy more or offer members a bundle deal based on periods of usage (Sandler, 2019).
Combo Model	This model offers customised membership that draws on different plans and different features to create a combination model that fits the organisation's particular

	strategy. For example, combining a drip model which focuses on fresh content with a community-style membership model (Sandler, 2019).
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2.5.2 Membership Website Features

According to Wright (2021), if an organisation is looking to construct a sustainable and long-term revenue stream, they need to deliver value, good content, and valid resources. In return, members will reward an organisation by paying their subscription plan and retaining membership. To build a successful membership site, the following features (Table 3) have been identified by Morand (2021) as the most integral features that a membership website should include.

Table 3: Overview of features of a membership site

Feature	Description
About us	The “About us” page is usually the first-place prospective members evaluate if the membership is well-matched with their needs. Therefore, a well-defined and succinct About us page will assist prospective members in valuing the organisation’s purpose and the reason the member should become a member (Morand, 2021).
Membership information	It is important for an organisation to offer it members a clear description of the membership information such as levels, fees, and the advantages of each membership level (Morand, 2021).
Membership application form	Organisations need to make it simple for first time members to join by providing an online membership application form where they can select their preferred membership level, put in their information, and begin using the site immediately (Morand, 2021).
Online payment processing system & Membership	Morand (2021) suggests that new and returning members pay their membership fees through an online payment processing system. This should be professional, safe, and link to the membership management software immediately to keep track

Management Software	of payments and access levels. This also enables easy communication with members through emails and newsletters.
Members-only area	The member-only area is a vital component of the organisation's membership site because this is what the members see the most value in. These are the exclusive spaces of the site where an organisation offers resources, courses, significant updates, and access to other advantages. A member-only area is also where members can connect and converse through an online platform and maintain their member profile (Morand, 2021).

2.6 Analytical Framework

This section offers an integrated overview of the pertinent theoretical and conceptual constructs.

2.6.1 *Theoretical Framework: A Framework to Evaluate User Experience*

UX benchmarks will be used to measure user's experience of the digital platform (website). The study will consider two types of benchmarks: retrospective and task-based.

- **Benchmarking the User's Attitudinal Experiences**

The theoretical framework that will underpin this study will involve conducting a benchmark evaluation of the UX design of the digital platform (website). According to Maioli (2018), the Key Performance Indicators (KPI's), "or ways to measure performance, will help you to demonstrate the success of all the UX problems that were fixed or changed" (p. 17). Performance measures can come from diverse sources, including "user research (usability, testing, surveys, structured interviews, heuristic evaluations, card sorting, heat maps, A/B tests, and so on) and/or analytics, as soon as a task success rate, time on task, page views, clicks, taps and so on" (Maioli, 2018, p.17).

A UX benchmark provides a quantifiable measure of an interface such as a website, mobile app, or software (Sauro, 2018). A suitable benchmark suggests how the performance of the interface scores comparative to a significant contrast from a previous point in time, competition, or industry benchmark (Sauro, 2018). There are two types of benchmark studies: retrospective and task based. For retrospective studies, participants are requested to recollect their latest experience with an interface and give a response. For task-based studies, participants are requested to try prearranged tasks using the interface in a controlled situation, which mimics real usage (Sauro, 2018). Figure 3 highlights the benchmark study types.

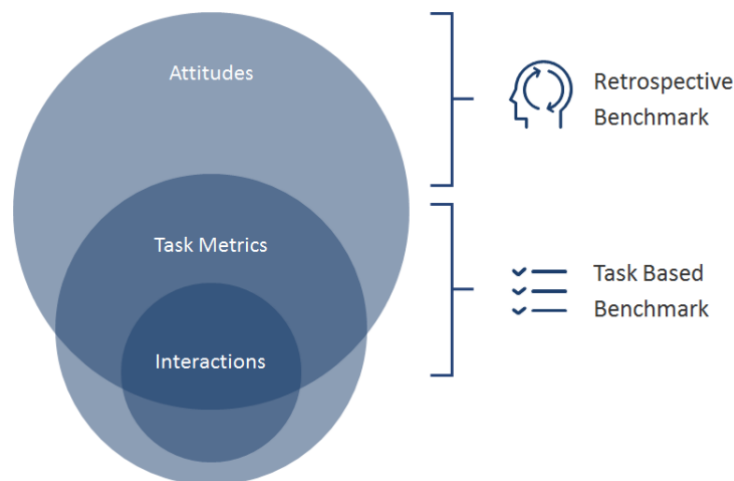


Figure 3: Retrospective and task-based benchmarks (Sauro, 2018)

UX benchmark studies can use a combination of retrospective and task based studies (Sauro, 2018). However, the benchmark study that is most applicable and that best addresses the research objectives for this qualitative study is retrospective benchmarking. This study will employ retrospective benchmarking because the study focuses on attitudinal UX metrics, where a user's attitude to the interface is considered. For example, does the user feel there was enough content on the website (Kucerova, 2020)? Attitudinal metrics are concerned with measuring qualitative data, such as usability, trust/credibility, appearance and loyalty (Kucerova, 2020; Sauro, 2015a). For both retrospective and task-based benchmark studies, level metrics are needed (Sauro, 2018). According to Sauro

(2015a), the most common study metrics for retrospective or attitudinal metrics are the Net Promoter Score (NPS), the System Usability Scale (SUS) and the Standardised User Experience Percentile Rank Questionnaire (SUPR-Q). Each metric is discussed below.

- **Net Promoter Score (NPS)**

A key metric to measure UX is the customer loyalty. The NPS provides a measure of customer satisfaction or loyalty (Krol et al., 2015). The “NPS is based on a single question: *How likely is it that you’ll recommend this product or service to a friend or colleague?* Participants can give an answer ranging from 0 (‘Not at all likely’) to 10 (‘Extremely likely’)” (Krol et al., 2015, p. 3100). Responses fall into one of three classifications to establish an NPS score: promoters (who provide word-of-mouth promotion), passives (indifferent users) or detractors (dissatisfied users).

To calculate the NPS score, the results are considered between -100 and 100 points. As shown in Figure 4, below 0 needs improvement, above 0 is good, above 30 is great and above 70 is excellent (Grigore, 2022).

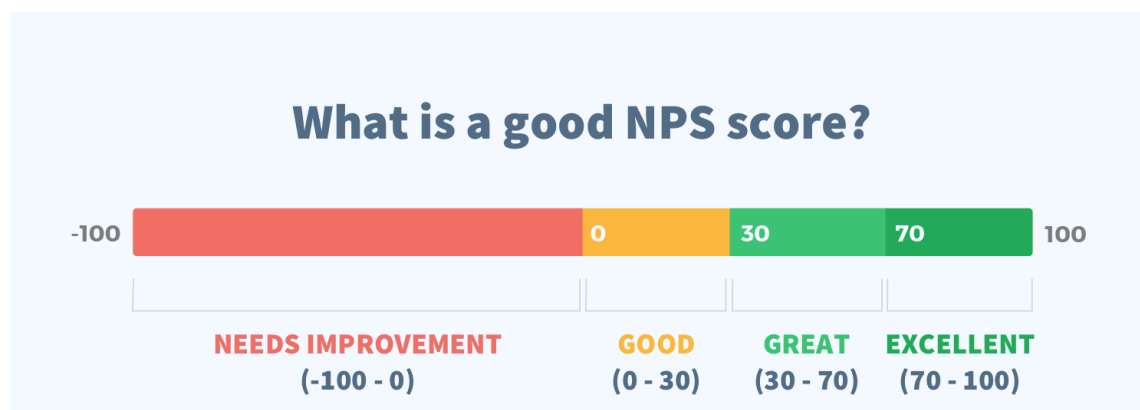


Figure 4: Interpretation of NPS score (Grigore, 2022)

- **System Usability Scale (SUS)**

This scale is a 10 item questionnaire commonly used to quickly measure perceived usability of systems, software and websites (Peres et al., 2013). It has become an industry standard and is used frequently in retrospective benchmarks for

business and consumer software (Sauro, 2018). It is administered with a 5-point likert scale from Strongly disagree to Strongly agree.

- **Standardised User Experience Percentile Rank Questionnaire (SUPR-Q)**

An alternative to the SUS is the SUPR-Q, an 8-item questionnaire purposely designed to evaluate the overall “quality of the website user experience” (Sauro, 2018). According to Sauro (2015b, p.73), the most common constructs are measures of “usability, trust/credibility, appearance and loyalty”. The SUPR-Q addresses the broader attitudes that affect the user experience while reducing it to as few items as possible (Sauro & Zarolia, 2017). Table 4 provides the SUPR-Q sub scale items. It is administered with a 5-point likert scale from Strongly disagree to Strongly agree.

Table 4: SUPR-Q subscale items (Sauro, 2018, p.59)

Usability	• This website is easy to use • It is easy to navigate within the website
Credibility/Trust	• The information on the website is credible • The information on the website is trustworthy
Appearance	• I found the website to be attractive • The website has a clean and simple presentation
Loyalty	• How likely are you to recommend this website to a friend or colleague? • I will likely visit this website in the future

Sauro (2018) argues that the SUPR-Q is a better alternative to the SUS for website benchmarks, because:

- SUPR-Q measures further than SUS but it does so with less items.

- SUPR-Q captures attitudes of trust and appearance in separate elements, which aids to comprehend how these elements affect intent and probability to return.
- SUS scores are compared across a variety of products, whereas the SUPR-Q scores focuses on websites.

For the purpose of this study, the SUPR-Q will be adopted because it is tailored for website benchmarking. In addition the SUPR-Q, the NPS score will be used to measure customer satisfaction which is beneficial because “all metrics and activities including user experience metrics end to revolve around the NPS” (Sauro, 2018, p.63). For the purpose of this study, due to the qualitative nature, and the low number of members in the membership-based entity, the SUPR-Q scale will be adapted for qualitative use through semi-structured interview questions.

- **A Framework to Evaluate and Improve the User Experience**

Maioli (2018) suggests that a framework is needed to monitor UX metrics, and suggests a Sauro’s (2015a) framework which defines “tasks, users and metrics and then measuring before and after making changes” (p. 3). Table 5 provides an overview of the Sauro framework to evaluate and improve user experience which consists of the five phases.

Table 5: Framework to evaluate and improve the user experience

Define your outcome measures	The metrics should be equivalent to the research goals. For instance, probability to recommend and buying rate are suitable items to measure (Sauro, 2015a).
Define the users and what they are trying to accomplish	Who are the customers and what are they aiming to accomplish? (Sauro, 2015a).
Measure the baseline	Begin by measuring the present product experience and then gather the metrics you identified (Sauro, 2015a).

Make your changes	Apply your new design, feature, branding, or bug fix (Sauro, 2015a).
Measure after your redesign	Measure once more to see if the challenges were solved or if there are new recognised challenges in the process (Sauro, 2015a).

The Sauro (2015a) framework is also shown in Figure 5. This study will use an adapted version of Sauro's (2015a) framework. The study will only use the first three phases because proposed changes will not be implemented as part of this study. The study is limited to proposing recommendations based on the measurements. Therefore, any changes/recommendations will not be implemented nor measured afterwards due to the objectives and associated time constraints of this study.

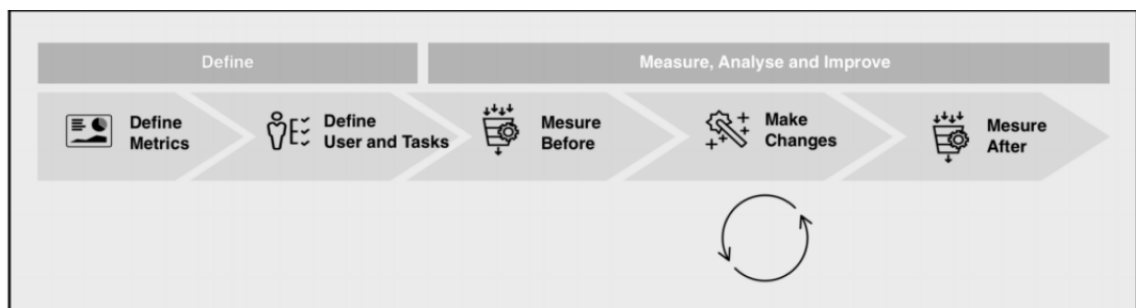


Figure 5: Framework to evaluate and improve the user experience (Maioli, 2018).

Sauro (2015a) states that metrics should align with research goals and the purpose of this study is to evaluate the UX for a membership-based website. Therefore SUPR-Q aligns to the research objectives because it was created specifically to evaluate websites. The second phase of the framework requires the selection of relevant metrics. Therefore, the study used an adapted version of the SUPR-Q and NPS questionnaires in the form of interview questions to obtain a holistic understanding of user needs, tasks and experiences. The third phase requires the measurement of the user experience. Therefore, in this study members and staff were interviewed to evaluate their experiences with the website.

2.6.2 Conceptual Framework

The conceptual framework brings together the key concepts to address this study's objectives. The conceptual framework is represented in Figure 6.

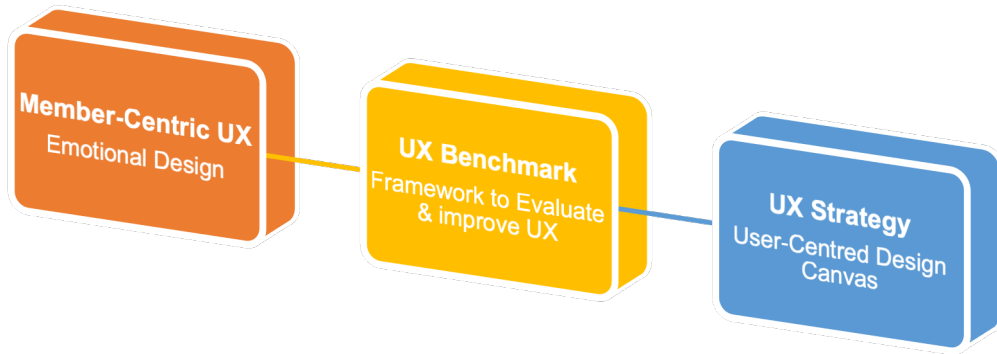


Figure 6: Conceptual framework for the study

The conceptual framework consists of the following interrelated concepts:

1. Member-Centric UX Design

A membership-first approach is vital for a member organisation to develop, engage and maintain existing memberships (Hudson, 2021). It is imperative that a membership organisation implement a member-centric user experience because it places the users at the heart of UX design and development (Hudson, 2021). The importance of a member-centric user experience will be discussed, and the methods used to deliver value to members such as rational and emotional value will be considered (Sheth et al., 1991). The extent of both values will be considered for the digital platform of the membership-based entity. Walter's hierarchical design proposes four levels of emotional design which are functional, reliable, usable, and pleasurable (Ritter & Winterbottom, 2017, p.62). The four levels of design can be used to create a design that boosts positive user experiences that encourages longer associations with an organisation.

2. UX Benchmark Evaluation

The theoretical framework discussed above adapts the SUPR-Q questionnaire (Sauro, 2018) and the Sauro (2015a) framework to evaluate user experience. The questionnaires will be adapted to conduct a qualitative benchmark evaluation of user experience using attitudinal/retrospective benchmarking and measuring the user experiences.

3. UX Strategy and User Centred Design Canvas

The results of the measurement or evaluation will be used to suggest improvements. To propose a revised UX strategy, there are crucial elements that need to be considered in the framework of a UX strategy. As the focus of the study is around the digital platform of a membership-based entity, the User Centred Design Canvas (UCDC) has been selected. The tool was created out of need for a simple and effective canvas that supports the user experience design process (Zawadzki, 2016). The study takes a member-centric user centred approach, and this model enables that because it is based on a user-centred approach. It puts the users at the centre of the process and is built on research that focuses on how best to serve user's needs and the business goals (Zawadzki, 2016).

2.7 Conclusion of Literature Review

This research aims to evaluate the UX for the digital platform of a South African membership-based entity. The study will investigate how an organisation's digital platform, through applying member centric user experience design, can improve the online experiences of prospective members and members. This chapter has reviewed relevant literature and provided the analytical and conceptual framework through considering the elements of user experience principles and processes. Therefore, the propositions for the study are as follows:

2.7.1 *Proposition 1*

The current UX of the digital platform (website) of a membership-based entity in South Africa can be evaluated using a framework of qualitative, attitudinal/retrospective benchmarking metrics.

2.7.2 *Proposition 2*

The user experience evaluation of the current digital platform (website) for a membership-based entity in South Africa can be used to suggest high-level user experience improvements for members and prospective members.

CHAPTER 3. RESEARCH METHODOLOGY

3.1 Research approach

The research makes use of a qualitative research methodology in which a case study method is employed. In broad terms, qualitative research is a methodology for investigating people's experiences using research methods such as "in-depth interviews, focus group discussions, observation, content analysis, visual methods, and biographies" (Hennink, Hutter & Bailey, 2020, p.10). Qualitative research "aims to address questions concerned with developing an understanding of the meaning and experience dimensions of human's lives and social worlds" (Fossey et al., 2002, p.717). The ability to empathise with the user is at the centre of the UX and one of the most valuable ways to comprehend what a user is experiencing is by employing a qualitative research methodology (Chen, 2020). As this study seeks to understand the complex and nuanced experiences of members and employees regarding the UX in the case study, a qualitative approach helps to capture the richness of these experiences. Qualitative research covers a broad range of techniques and philosophies and can be adaptable to new approaches (Hennink et al., 2020). Furthermore, this study employed retrospective benchmarking because the study focuses on attitudinal UX metrics. Attitudinal metrics are concerned with measuring qualitative data, such as usability, trust/credibility, appearance and loyalty (Kucerova, 2020; Sauro, 2015a). Therefore, a qualitative research methodology is the most suitable research approach for examining attitudinal UX metrics of a membership-based entity's website through feedback from members and employees.

3.2 Research design

The research design is a case study that focuses on a particular membership-based entity. The advantage of using a case study is that it provides an opportunity to have an in-depth examination of member or user experiences in a

particular context. A case study “is a research approach that is used to generate an in-depth, multi-faceted understanding of a complex issue in its real-life context” (Crowe et al., 2011, p. 1). The case study design is relevant for this study because case studies provide verifiable data, can be conducted remotely and are relatively inexpensive.

The study employed semi-structured interviews. This is a technique where prearranged questions cover a set of themes making use of open-ended interview questions to collect information about the UX design associated with the entity’s digital platform (Saunders et al., 2009). Members and staff were asked about their experiences of using the Council’s website (<https://dronecouncil.africa/>). The semi-structured interview intended to obtain subjective replies from individuals regarding specific circumstances or phenomenon they have experienced (McIntosh & Morse, 2015). Therefore, the same questions were asked, but not necessarily in the same order, to best accommodate each interviewee and their responses. This method was suitable as it enabled participant opinions to be explored through discussion based on the accounts of their experiences and points of view.

3.3 Case and sample

The identified case is the current stakeholders of the membership-based entity, the Drone Council South Africa (DCSA). The aim of the organisation is to organise their members and stakeholders to augment vigorous expansion of the drone economy (Phenyane, n.d). As a membership-based entity, they need to amplify their membership to gain traction and recognition. The stakeholders within the case can be divided into two samples, one group being the DCSA members, and the second group is the DCSA employees, including the DCSA chairpersons who oversee the different membership categories.

3.3.1 Sample 1

The first sample consists of current DCSA members, with the aim of evaluating their user experience of DCSA's digital platforms. This study made use of convenience sampling, a sampling technique making use of participants who are easily accessible and convenient to the researcher. Therefore, this method was fast, inexpensive, and convenient (Elfil & Negida, 2017). The researcher first obtained permission to recruit participants from the membership organisation (Elfil & Negida, 2017). With the assistance of the entity's leadership, the sample of individuals was randomly selected from the member population of the different membership categories. Therefore, the sample was pulled from that part of the population that was readily available and convenient (Bhattacharjee, 2019). This sampling strategy was appropriate for the study as current members could be invited to participate.

The intention was to select a sample of 10 members to interview, with at least one member from each membership category. Currently, DCSA has ten membership categories, as shown in Table 6. However, only eight members from four membership categories participated in the interviews. Table 7 shows the members who were interviewed and the categories they belong to. The categorisation M1-M8 was used for representing member interviewee quotations in the findings section.

Table 6: DCSA Membership Categories

1.	License Or Permit Holders	6.	Allied Associations
2.	Drone Pilots and Commercial Pilots	7.	Academic Institutions and Training Organisations
3.	New License or Permit Applicants	8.	Cadets and Incubators
4.	Professional Development in Allied Sectors	9.	State Owned Companies

5.	Manufacturers and Technicians	10.	Drone Enthusiasts and /or Leisure Users
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3.3.2 Sample 2

The sampling was guided by utilising a non-random sample of relevant employees selected by the entity to address the research objectives. This study made use of expert sampling for the selection of the second sample group which is a “technique where respondents are chosen in a non-random manner based on their expertise on the phenomenon being studied” (Bhattacharjee, 2019, p. 67). This strategy was appropriate for this study because the sample consists of DCSA employees who are chairpersons of the different chambers (categories of members shown in Table 7). The intention was to interview 10 DCSA employees but only 8 DCSA employees participated in the interviews. Table 8 displays the chairpersons that were interviewed and the category they belong to. The categorisation S1-S8 was used for representing staff interviewee quotations in the findings section.

Table 7: Participants interviewed and their categories.

Members of DCSA		Staff of DCSA	
Member 1 (M1)	Cadets and Incubators	Staff 1 (S1)	Drone Enthusiasts and /or Leisure Users
Member 2 (M2)	Professional Development in Allied Sectors	Staff 2 (S2)	Drone Pilots and Commercial Pilots
Member 3 (M3)	Academic Institutions and Training Organisations	Staff 3 (S3)	New License or Permit Applicants
Member 4 (M4)	Drone Pilots and Commercial Pilots	Staff 4 (S4)	Allied Associations
Member 5 (M5)	Cadets and Incubators	Staff 5 (S5)	Cadets and Incubators

Member 6 (M6)	Academic Institutions and Training Organisations	Staff 6 (S6)	Professional Development in Allied Sectors
Member 7 (M7)	Cadets and Incubators	Staff 7 (S7)	Manufacturers & Technicians
Member 8 (M8)	Academic Institutions and Training Organisations	Staff 8 (S8)	State Owned Companies

3.4 The research instruments

The research instruments for this study consist of two interview guides. These guides consist of semi-structured interview questions, based on the two different samples (DCSA members and DSCA staff). These interview guides are supported by participant information sheets (example in Appendix A) and a participant agreement/consent form (shown in Appendix B). These research instruments are suitable for this study because subjective knowledge is required about the user's attitudes towards and user experiences of the digital platform (McIntosh & Morse, 2015). The interview guide for each sample group consists of questions that draw from the research objectives and theoretical framework. The questions have been specifically compiled for this study. The interview guides are shown in Appendix C.

3.5 Procedure for data collection

Permission to conduct the study was obtained from the Wits Business School and ethical clearance was obtained (Protocol number: WBS/DB0614233J/731). The clearance certificate is shown in Appendix D. Approval to conduct the research was also obtained from DCSA (permission letter shown in Appendix E).

Prospective interviewee details were sourced from the chairman of DCSA, aligned to the sampling strategy. Random samples were chosen from the provided list of current members (sample group 1) and non-random samples from

staff (sample group 2). The prospective interviewees were contacted via email, requesting permission to participate in the study. The email provided an overview of the research topic and scope (as contained in the participant information sheet). Once interviewees agreed to participate in the research, they were sent a consent form to complete as formal notification of their willingness and agreement to participate. The online interviews conducted via WhatsApp Call, Zoom, Microsoft Teams and Google Meet. Each interview was approximately 20 to 30 minutes. All interviews were audio recorded (with the permission of the interviewees). The recordings were downloaded on to the researcher's desktop computer and later transcribed by a digital transcription service called Word Online (which is free and open source). These transcriptions were personally verified by the researcher and were anonymised. Excerpts from the transcription were also verified against recordings by the research supervisor.

There were eight member interviews and eight staff interviews that were conducted. The data reached saturation after six interviews for members and seven interviews for staff as no new insights, or information emerged beyond those interviews. This provided proof that the chosen sample size was appropriate, and that the data collected was adequate for a detailed analysis (Bhattacharjee, 2019). Additionally, collecting data from two sample groups, enables the comparison of experiences from members and employees, providing triangulation in the study (Lincoln & Guba, 1985).

3.6 Data analysis strategies and interpretation

The transcripts from both interview groups were analysed using thematic analysis which is a process of identifying patterns or themes within qualitative data (Braun & Clarke, 2006). The analysis in this work identifies themes at the latent level as it looks beyond what has been said and "...starts to identify or examine the underlying ideas, assumptions, and conceptualisations – and ideologies - that are theorised as shaping or informing the semantic content of the data" (Braun & Clarke, 2006, p. 84). Thematic analysis was used as it is most suitable to addressing the research objectives. Thematic analysis is a systematic method of

breaking down and arranging rich data from qualitative research by cataloguing individual observations and readings with suitable codes, to assist in the unearthing of the most important themes (Rosala, 2020). Thematic analysis offers an adaptable method that can be altered to suit different types of qualitative research (Braun & Clarke, 2006; King, 2004, as cited in Nowell et al., 2017). This method is an appropriate data analysis approach for this study because it provides a systematic way for managing numerous forms of qualitative data. Thematic analysis provides researchers with flexibility, to yield an in-depth and comprehensive, yet multifaceted view of the data collected (Braun & Clarke, 2006). Braun and Clarke (2006, p. 3354) “distinguish between top-down or theoretical analysis which is driven by specific research question(s) and/or the analyst’s focus, and a bottom-up or inductive one that is more driven by the data itself”. This study’s analysis was driven by the UX research questions and the theoretical framework that informed the themes, therefore the analysis was more deductive.

Braun and Clarke’s (2006) procedures were used to carry out a thematic analysis for identifying, analysing, and reporting qualitative data:

- **Step 1** - Familiarity with the material – examine and re-examine the interview transcripts and make relevant notes.
- **Step 2** - Production of initial codes – which features of data emerges in a significant and appealing way.
- **Step 3** - Searching for themes – the start of interpretive analysis and should refer to the relationship between codes, subthemes, and themes.
- **Step 4** - Re-examining of themes – themes are evaluated more intensely.
- **Step 5** - Definition of themes – this is the refining and fine-tuning of themes and potential subthemes.
- **Step 6** - Producing the report – the researcher relays the results convincingly with supportive arguments that addresses the research objective.

The procedures for each step are described. The first step was to become familiar with the data by reading the transcripts several times. In the second step, the

data was organised in a methodical way by producing initial codes. Open coding was used to organise the data which is to collect codes under potential subcategories (Vaismoradi et al., 2013) and refine these during the coding process. Braun and Clarke (2006) explain that there are no firm and unwavering instructions about what constitutes a theme because a theme is considered by its substance. In step three, emerging themes were considered. Codes were examined and the relationships between them considered. At the conclusion of this stage, codes had been arranged into wider preliminary themes that appeared to address the research objectives. The preliminary themes were predominantly descriptive as they describe repetitions in the data pertinent to the research questions (Braun & Clarke, 2006). Step four entailed re-examining, adjusting, and evolving the preliminary themes further. This led to the formation of themes and the additional cataloguing of codes. In this step it was important to read the data connected with each theme and reflect whether the data supports it (Braun & Clarke, 2006). For example, in the members thematic analysis theme *Trust/Credibility*, the data was further categorised to associate how outdated information is related or linked to members either trusting or distrusting the website. To “identify the ‘essence’ of what each theme is about” (Braun & Clarke, 2006, p.92), step five involved refining the themes. The questions to consider were: What is the theme revealing? How do subthemes intermingle and connect to the main theme? How do the themes link to each other? (Maguire & Delahunt, 2017).

Tables 8 and 9 show the themes and codes generated from the transcripts for the members and staff interviewed. An example quotation is provided to illustrate each code.

Table 8: Member themes, codes, and examples

Theme: Usability	Theme: Trust/Credibility	Theme: Appearance	Theme: Loyalty
Code: Broken links & difficult application process	Code: Lack of information	Code: Website is attractive	Code: Low website traffic & return rate
<i>"The membership link does not work, so they're telling people to become members, join and everything. However, the link where they supposed to click, and join does not work so there's no use" (M7).</i>	<i>"No information, they just tell you to become a member of one of the chambers, but they don't tell you what each of the chambers are or do, so there's not really enough information on that" (M7).</i>	<i>"I would say yes, it is attractive again, very basic, easy to understand. The front is readable and easy to navigate" (M2).</i>	<i>"I've only used it once to do the membership application and I used it once to have a look at the content that was on there and I used [it] the third time now for prepping for this interview" (M8).</i>
Code: Website is not monitored	Code: Outdated information	Code: Presentation is clean and simple	Code: Mix of Recommendations
<i>"The contact form on the website is not manned because I asked for information about memberships via the contact form and nobody got back to me." (M8).</i>	<i>"I notice that it's quite outdated, articles are from 2020 and again we are in 2022 now. There needs to be new content [...] to keep people updated and interested in the council" (M2).</i>	<i>"It has a very clean presentation. It's simple. There's not a lot going on. It's not confusing. It's easy on the eye" (M7).</i>	<i>"I would give it a one, in other words, not very likely. The information is very scant in terms of the mission and vision. It's just statements, but it doesn't say how or what they're doing to achieve it" (M8).</i>

Table 9: Staff themes, codes, and examples

Theme: Limited View of Membership	Theme: Perception of Website
Code: Differing accounts of joining the process	Code: Website purpose and value around awareness and marketing
<i>"There were webinars and advertisements [so] that you can join. Those that join can click on a link and then there was also a bank account that was provided. Members then pay their membership fee ... and then we don't know what happens thereafter" (S3)</i>	<i>"The purpose of the website is to excite and to inform the general public of the technology as well as how we are organising the ecosystem to be able to get value out of that technology" (S4).</i>
Code: Chairpersons have little knowledge of their members	Code: Website easy to use and navigate
<i>"Maybe if you were to ask a member as to what they need because I don't want to assume what it is they need" (S6).</i>	<i>"It is easy to navigate but it doesn't have a lot of data" (S7).</i>
Code: Problems in attracting and retaining members	Code: Not enough information on the website for each chamber
<i>"A number of people that had joined didn't see anything happening because we're still designing courses, etc and therefore, some of the people have left or there has been a natural attrition" (S5).</i>	<i>"Information might not be enough; it might not be... especially for somebody who doesn't know anything about the drone economy or drone council. It might not be enough, so it will have to be tweaked and customised to all potential clients" (S8).</i>
	Code: Suggestions to improve the website
	<i>"I think that maybe more links to the social media platforms because I know that young people. They don't like so much the internet, they prefer LinkedIn and those sorts of platforms. So, if we could tie those two together that that might make it more appealing to a younger generation of people" (S2).</i>

3.7 Possible limitations and challenges of the study

This is a qualitative research study regarding the UX of the digital platforms of a particular member-based entity in South Africa, where the data is based on the perceptions of users and staff members. The results may therefore be different than if quantitative data collection methods had been selected. Furthermore, members could not be sampled from all membership categories in the organisation as not all members were available or responded to requests for interview participation. Members in other membership categories may have different experiences or perceptions about the website. The focus of the study is also limited to the analysis of the perceptions of the UX design of the digital platform of the membership-based entity and will not develop nor implement a new UX design.

3.8 Quality Assurance

3.8.1 *Transferability*

Transferability refers whether the study methods and findings can be transferred to other cases (Tobin & Begley, 2004). The results of the research may not be transferable to similar membership-based entities in a South African context. However, the methods may be transferable. Findings may vary when using alternative groups of participants, within the context of the stakeholders that will be relevant to that membership-based entity.

3.8.2 *Credibility*

To achieve credibility, one must employ numerous techniques to address credibility, involving activities such as methods triangulation, triangulation of sources, member checking and analyst triangulation (Lincoln & Guba, 1985). The study uses one data collection method but compares the datasets of two different

sample groups to triangulate different data sources (the perspectives of both members and employees). Furthermore, the researcher analysed the UX independently to verify the data collected from the interviews. The data collection and analysis processes are followed systematically to ensure credibility. Trustworthiness was promoted by taking field notes after each interview and referring to these during analysis. Furthermore, debriefing sessions were held with the research supervisor. For example, the accuracy of interview transcripts was checked, the interview records were checked and processes were documented “that can allow an independent audit of data collection and analysis if needed” (Bhattacharjee, 2019, p.106).

3.8.3 Dependability

To attain dependability, one needs to ensure that the research procedure is rational, traceable, observable, and visibly recorded (Tobin & Begley, 2004). The dependability of the research can be evaluated if the research processes are transparent and can be reviewed (Lincoln & Guba, 1985). The research instrument questions have been designed to achieve the objectives (discussed in Chapter One). The research supervisor has had visibility of this process. The data collection and analysis procedures have been described in this chapter. Aligned to the research protocol, the records of the original data, transcripts, and recordings are securely stored in an encrypted two key password protected hard drive. Lastly, the research process was catalogued by creating a clear inventory of data and research that is clearly observable and traceable throughout the research process (Halpern, 1983).

3.9 Ethical considerations

This research followed all the stipulated ethical standards for research as guided by Wits University. All participants were adequately informed about the study to ensure that they are aware of what is expected of voluntary participants (Nijhawan et al., 2013). All participants were only interviewed if they gave their informed consent by signing a consent form. The research did not involve any

discrimination based on age, gender, or race (Nijhawan et al., 2013). All research participants were protected and treated with respect; this includes the respondents, the researcher, the university, and other stakeholders involved in this research. All data was treated as confidential (Nijhawan et al., 2013). This was a low-risk study in terms of potential harm to participants as interviewees were asked about their personal experiences and opinions related to their workplace activities (for staff) and experiences as members (for members). If a participant felt uncomfortable in answering a question, the interview moved to the next question. Participants were given the option to withdraw from the study at any point. While the identity of the interviewees is known to the researcher, the individual identities are not identifiable in the study results to ensure anonymity. The information participants gave is held securely and kept confidential and a pseudonym was used to represent their participation in the research. As discussed earlier, ethical clearance was obtained from Wits University, which required the minimum ethical standards to be met by this research.

CHAPTER 4. PRESENTATION OF FINDINGS

4.1 Introduction

This chapter presents the findings of the semi-structured interviews that were conducted with the staff and members of the DCSA case study. This chapter presents the themes that emerged from the data collected. For ease of reference, Figure 7 provides the home page of the current DCSA website which can be viewed at the following URL link: <https://dronecouncil.africa/>

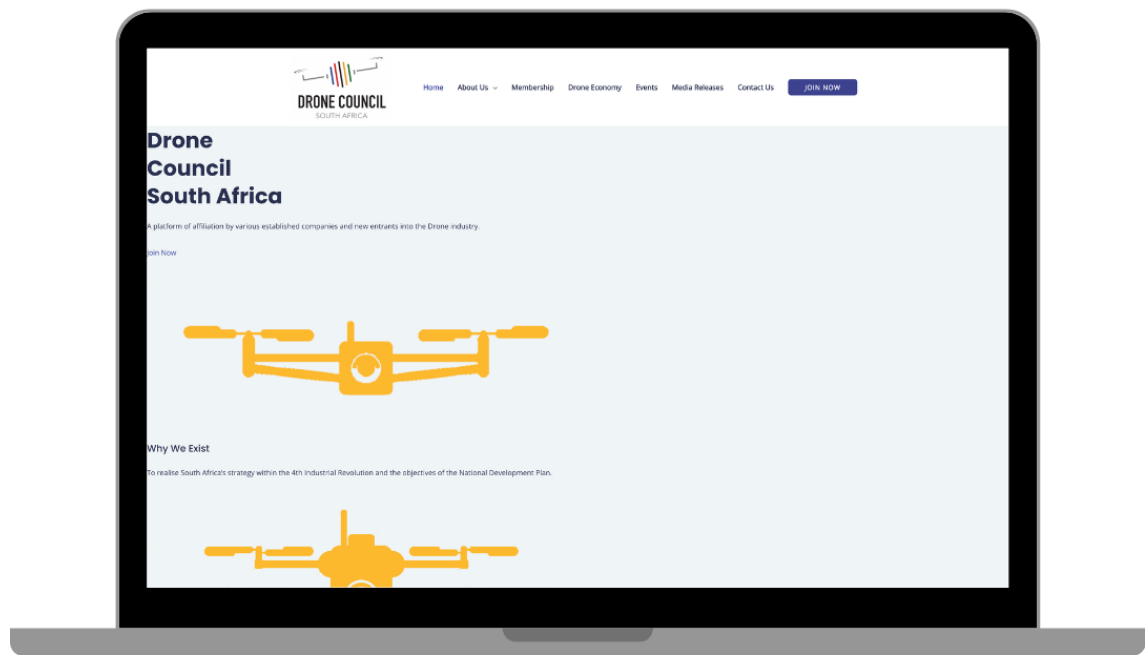


Figure 7: DCSA Website Home Page

4.2 Results pertaining to Proposition 1

The purpose of this section is to report the findings from the adapted SUPR-Q questionnaire instrument used for the semi-structured interviews. The findings are presented according to the sample groups: members and employees.

4.2.1 *Member User Experience Findings*

The themes are based on the four UX categories (Sauro, 2018): usability, trust/credibility, appearance, and loyalty. The themes and codes are also presented in the thematic map shown in Figure 8. The following section presents the themes and codes, supported by the member's views and experiences associated with them.

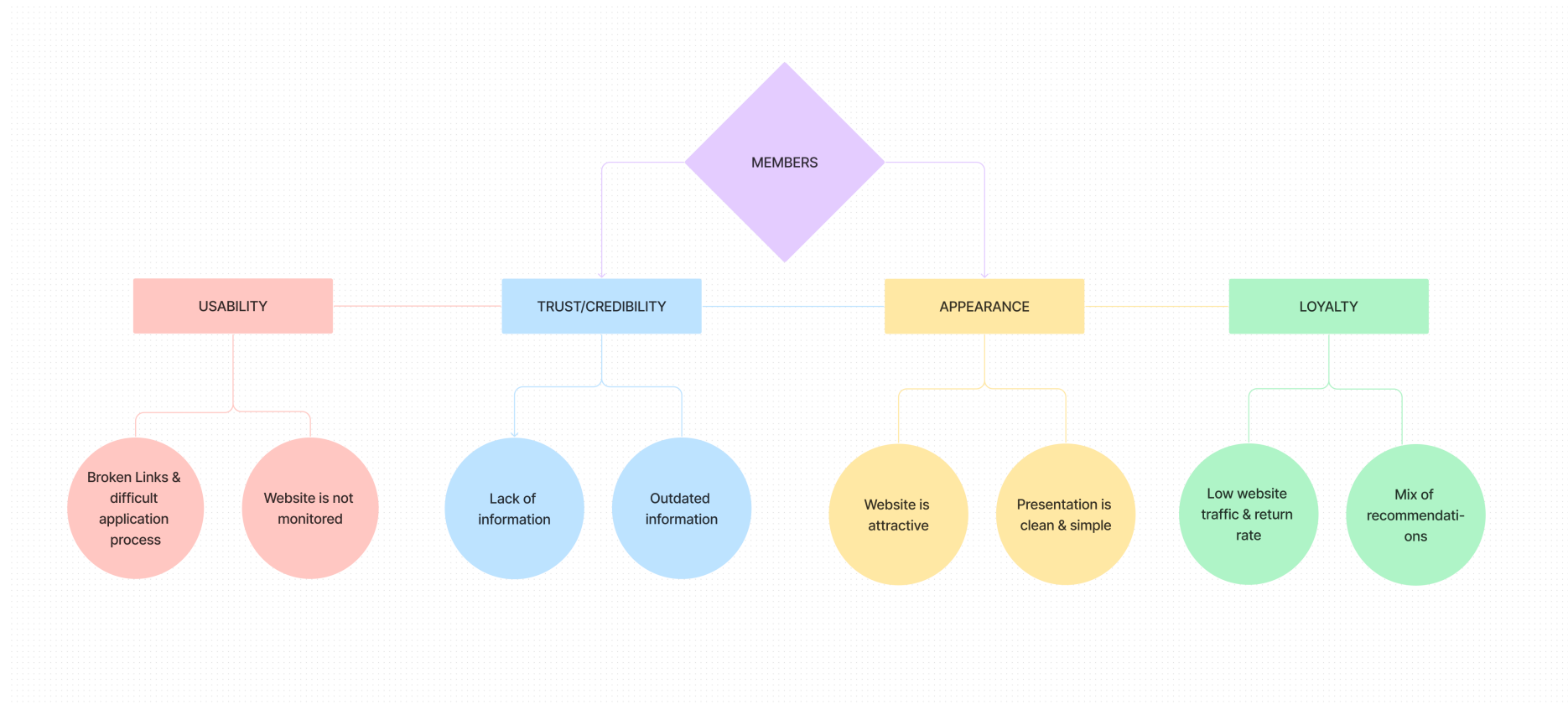


Figure 8: Member User Experiences Thematic Map

Theme 1: Usability

The codes that emerged from the 'usability' theme were: (1) broken links and difficult application process; and (2) website not monitored.

Code 1.1: Broken links and difficult application process

Members expressed that they were initially confused as to how to become a member because the information was not apparent or clear - *"The first time when was trying to be the member... I was a bit confused on how you become a member and then how do you proceed with your application. Sort of things like there was no specifications..."* (M4). When members did find the membership link and clicked on the *Join now* Call to Action (CTA) button it did not work and it produced an error code. Members expressed their dissatisfaction and frustration with the membership link not working, for example - *"The membership link does not work, so they're telling people to become members, join and everything. However, the link where they supposed to click, and join does not work so there's no use"* (M7).

Members who were able to access the application form expressed struggles using it. They expressed that it was difficult to upload documents and had to resort to contacting the DCSA for help:

It wasn't that easy because I had to send an email for the instruction[s]. I had to attach a document, I was struggling and then I had to contact one of the employees and they told me that they removed the options for attaching the document...(M3).

Code 1.2: Website is not monitored

Members felt that the website did not appear to be monitored because when they used the website contact form, they did not receive a response to their questions or comments. Members said that the DCSA is not easily reachable or accessible through their digital platform and that not much attention seems to be given to their website:

The contact form on the website is not manned because I asked for information about memberships via the contact form and nobody got back to me. So, it doesn't look like anybody is manning their contact form at all, because, you know, comments and questions posted there did not receive any response (M8).

These findings appear to indicate that the members sometimes struggled with using the platform and obtaining help to use the platform.

Theme 2: Trust & Credibility

The two codes that emerged from the 'trust and credibility' theme were: (1) the lack of information; and (2) outdated information on the website.

Code 2.1: Lack of information

Members said that the website lacked information, especially about the different membership categories. The perceived lack of information led them to question the site's credibility. The members were dissatisfied with the membership page as it just lists the membership categories without any substantive information or detail about what each membership category does or offers, for example - *"No information, they just tell you to become a member of one of the chambers, but they don't tell you what each of the chambers are or do, so there's not really enough information on that" (M7).*

Some members felt that the information on the site was not specific to the DCSA, and that the information seemed to function as a general marketing tool. Members also expressed that they do not see the need to regularly frequent the website for information:

The information is of no use to anybody there currently. So, there's no real need... What I'm trying to say is that there's no information on this website that you can't get from Google anyway. So, there's no specific need to come to this website other than for membership information (M8).

Code 2.2: Outdated information

Members expressed that the site's content was outdated and that this led them to question the site's credibility - *"It's very outdated, so I don't know if that counts if it's credible to this date"* (M7). For example, the site's last media releases and articles were published in 2020 and there is no current content - *"I notice that it's quite outdated, articles are from 2020 and again we are in 2022 now. There needs to be new content [...] to keep people updated and interested in the Council"* (M2).

Members also expressed that the site's *About us* page was outdated because the site has not removed the pictures and biographies of the board members who are no longer part of the Council anymore. The findings indicate that members find the information on the website to be minimal and often out-of-date. This leads to a feeling of distrust of the website or that it is not a credible source of information.

Theme 3: Appearance

The codes that emerged from the 'appearance' theme were: (1) website is attractive; and (2) presentation is clean and simple.

Code 3.1: Website is attractive

Very positively, members generally found the website attractive and mentioned that the site has a standard, basic design and layout which was visually appealing. For example, *"I would say yes, it is attractive again, very basic, easy to understand. The front is readable and easy to navigate"* (M2). However, members did mention that the website appearance could be improved by making it more lively, exciting, and interesting - *"It's a decent website. It needs some zhuzhing up, I guess"* (M7).

Code: 3.2. Presentation is clean and simple

Members expressed that they found the presentation of the website clean and simple and that was visually appealing to them. For example, *"It has a very clean*

presentation. It's simple. There's not a lot going on. It's not confusing. It's easy on the eye" (M7).

These findings indicate that while there is room for improvement, members generally found the website appearance to be attractive with a clear presentation.

Theme 4: Loyalty

The codes that emerged from the 'loyalty' theme were: (1) Low website traffic and return rate; and (2) Mix of recommendations.

Code 4.1: Low website traffic and return rate

Most members interviewed only visited the website infrequently. For some members, after they completed the application process they did not return to the website. For example, *"I've only used it once to do the membership application and I used it once to have a look at the content that was on there and I used [it] the third time now for prepping for this interview" (M8).*

Members expressed they were not likely to return to the website because of the outdated information and that there were not enough reasons to return to it. However, members were willing to return to the site if new content would be added regularly - *When they start putting updated articles or information about the chambers then I would be most likely to return and read up on what's happening..." (M7).*

Code 4.2: Mix of recommendations

Members who indicated that they were likely to recommend the website (gave a score above 6 out of 10) said they were likely to recommend the website because it is a good place to learn more about the DCSA.

The website contains all the information that someone who's willing to join the council can access and familiarise themselves with the Council. What they do and their ethos and any other thing that the Council gets up to.

The website is a good place to start because then they will get a feel based on the contents and the website to either continue to join or not (M6).

Members who were not likely to recommend the website to others (gave scores below 6 out of 10) gave reasons aligned to themes that have been discussed above. For example, some struggled with the application process and could not upload documents or that there was a lack of information relating to the membership categories. Other members were dissatisfied with outdated information and the join membership link not working - *“The information is very scant in terms of the mission and vision. It's just statements, but it doesn't say how or what they're doing to achieve it” (M8).*

4.2.2 Staff User Experience Findings

The purpose of this section is to report the findings of the staff of the DCSA in terms of the design of the website and the engagement with members. There are two themes that emerged: limited view of membership and perception of the website. The themes and codes are summarised in the thematic map shown in Figure 9. The findings below are grouped according to the themes and codes, supported by the staff views and experiences.

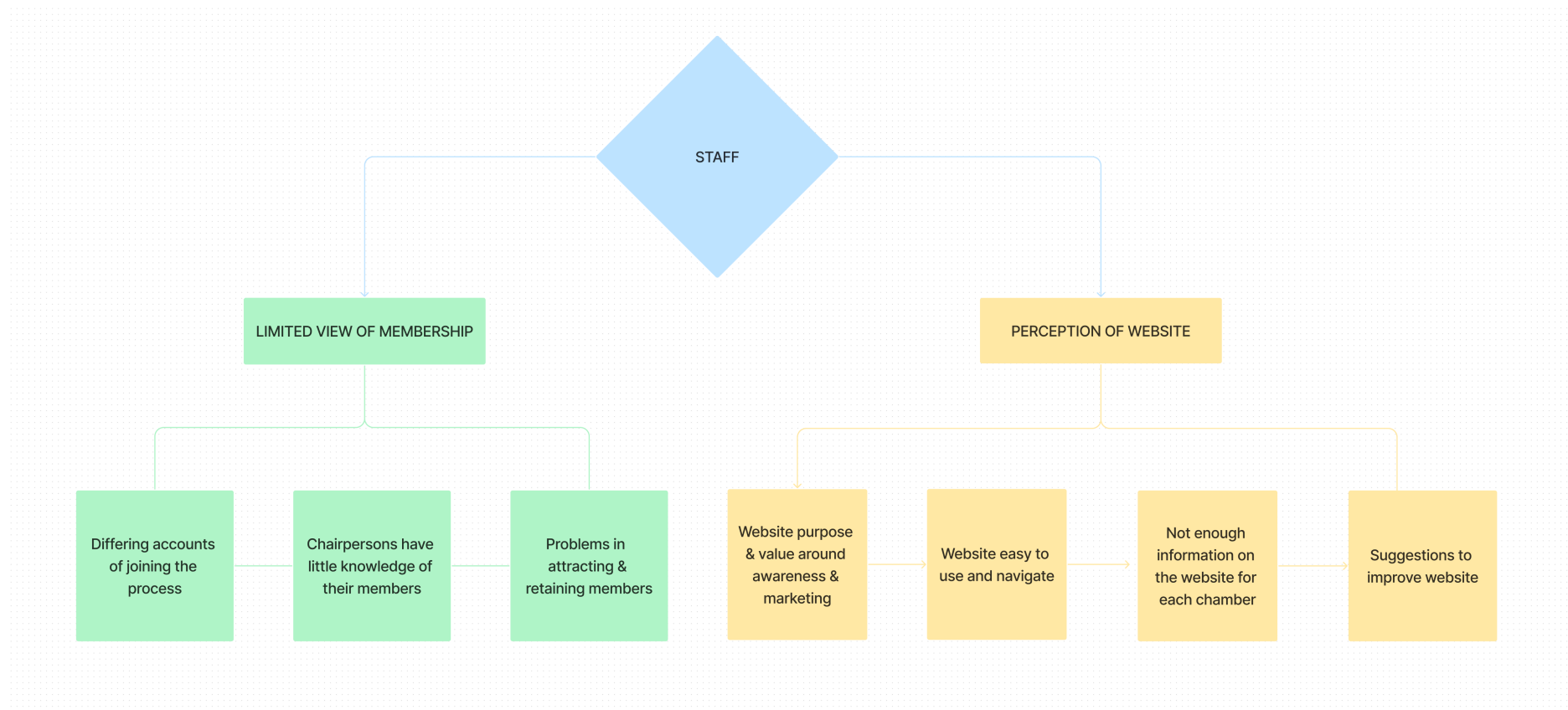


Figure 9: Staff Thematic Map

Theme 1: Limited View of Membership

Code 1.1: Differing accounts of the joining process

Chairpersons gave differing accounts of the membership joining process. Some chairpersons believed the joining process is simple and instantaneous and other chairpersons said the joining process takes two to three days. One chairperson said that the joining process had not been resolved and gave their version of the joining process:

It's not iron[ed] out yet the entire process. There were webinars and advertisements [so] that you can join. Those that join can click on a link and then there was also a bank account that was provided. Members then pay their membership fee ... and then we don't know what happens thereafter (S3).

One chairperson said that he personally calls members after he receives their application form to inform them that they are not a member yet and need to pay to become one:

You go to the website; you'll fill your details from what you would have given us the information on the website. [...] I will then call you and then tell you "Welcome to the chamber, but you are not a full member because you've not paid. This is the subscription fee for how much and for this long" (S6).

Code 1.2: Chairpersons have little knowledge of their members

Several chairpersons expressed that they were unaware of the number of members they have in their respective chamber. For example, *"I don't know and still waiting for the overall chairperson to provide us with the members, name[s] of the members and those members that paid already" (S3)*. Thus, they were not aware of their member's needs and experiences with the website: *"I don't know the needs of the members at this point. The names of the members have not been made known" (S3)*. Another chairperson indicated - *"Maybe if you were to*

ask a member as to what they need because I don't want to assume what it is they need" (S6).

When asked about which members are prioritised, the chairpersons gave different responses. Some chairpersons were unsure of which members to prioritise because they have not yet interacted with their members: *"Because I don't know the members, we don't know which members will be prioritised"* (S3). One chairperson said that they were prioritising black youth membership because many young people are unemployed in South Africa and because black people have been disenfranchised for a very long time. Another chairperson indicated that the members who were currently prioritised are education institutions and students because they wanted to be able to influence curricula towards drone technology and bring more awareness and interest to the industry.

Code 1.3: Problems in attracting and retaining members

Chairpersons were asked about how they attract and retain members related to the website. One chairperson said that it was difficult to attract new members because they were not marketing in mass media and the achievements that the organisation had were not being publicized: *"It has been a little bit of a problem in attracting because we are not advertising in mass media, and we also haven't started broadcasting our successes"* (S5). Chairpersons listed a variety of methods to attract members: using word of mouth to attract members and social media platforms such as Facebook, Twitter, Instagram, and LinkedIn to connect to prospective members. One chairperson said that they targeted institutions to attract students to their membership programme. Another chairperson indicated that they attend trade shows or expos and exhibit their drones to the public. There is also an internship programme aimed at unemployed youth that is used to attract members. Finally, some chairpersons said they mostly rely on other members to recruit new members.

Chairpersons also mentioned that there is difficulty in retaining members because they see no value or very little activity and decide to leave: *"A number of people that had joined didn't see anything happening because we're still designing*

courses, etc and therefore, some of the people have left or there has been a natural attrition” (S5). The Council is in the process of offering online courses to their members. The courses are aimed at providing information for each chamber that will facilitate or assist members with challenges they face in the drone industry and provide training, development, and upskilling.

Theme 2: Perception of website

Code 2.1: Website purpose and value around awareness and marketing

Chairpersons expressed that the website’s purpose was to create awareness about the Council, to inform and communicate to the public about the DCSA. The website is also used to organise the local drone ecosystem so that the public can get value out of drone technology: *“The purpose of the website is to excite and to inform the general public of the technology as well as how we are organising the ecosystem to be able to get value out of that technology” (S4).* The chairpersons believed the website gave the DCSA validity, authenticity and an experienced view and they believed its purpose is to advertise and market the DCSA – *“The website is to give the council the legitimacy, a professional outlook and also a selling point” (S8).*

Code 2.2: Website easy to use and navigate

Most chairpersons found the website easy to use and navigate and thought that it was straightforward and not complicated. They thought the functional utility met the requirements, for example, *“It is easy to navigate but it doesn't have a lot of data” (S7).* However, one chairperson highlighted their dissatisfaction with the membership link not working and said that members may expect an application form when they click the *Join now* button but instead, they are referred to contact the DCSA:

It is not helpful because you would expect any organisation or any company when you click the join... voila! There is either the application form or there is a process that allows you to join... It's just like when you are signing in a new website or let's say you want to join Google for the

first time. You've got to register there, so you can't go and click register and instead of getting at the registration process, you are told that get in touch with so and so... and this is us, it still refers you to some people. (S8).

It was also found that most interviewed chairpersons do not regularly interact with the website, and most are unaware of what information their prospective members are consuming or the difficulties they are facing regarding membership. For example, *"I don't interact with the website on a daily basis or even monthly basis a month, two months can go by without having me go to the website because there's no need for me to go there"* (S7). Additionally, some chairpersons expressed dissatisfaction with the website being too basic and felt it needed to be improved regarding that aspect. For example, *"It's very basic it could be set up by two kids in the backroom"* (S2).

Code 2.3: Not enough information on the website for each chamber

Chairpersons expressed that the website does not have enough information on their respective chambers - *"To be honest, not a lot, frankly..."* (S2). Some chairpersons noted that the membership information does not go into detail in terms of what each chamber does or offers:

Information might not be enough; it might not be... especially for somebody who doesn't know anything about the drone economy or drone council. It might not be enough, so it will have to be tweaked and customised to all potential clients (S8).

4.3 Results pertaining to Proposition 2

Members and chairpersons suggested several improvements they would like to see regarding the website. These suggestions are categorised according to the quality components of a website (usability, trust/credibility, appearance, and loyalty).

4.3.1 *Member suggestions to improve the website UX*

Usability: Members suggested that the website needs to be monitored and that any errors on the website should be fixed. For example, *“we should be able to upload our documents by ourselves because sometimes you might struggle to get hold of them to help you...”* (M3).

Trust/credibility: Members suggested that there needs to be new content to keep people updated and interested in the Council and more information on the Council. For example, *“they must give more information about what the drone council is about and what members are expected to gain”* (M4).

Appearance: Members suggested that the website needed to update to make it more appealing. For example, *“It's a decent website. It needs some zhuzhing up, I guess”* (M7).

Loyalty: Members suggested that new content be added, and the Council needs to update information and add more information about the chambers categories. For example, *“When they start putting updated articles or information about the chambers then I would be most likely to return and read up on what's happening”* (M7).

4.3.2 *Staff suggestions to improve the website UX*

Usability: Chairpersons suggested an e-commerce platform to help with the delayed payment system. They suggested that links to social media platforms be added on to the site to make it more appealing to their target audience. Chairpersons also suggested a feedback loop that allows the Council to regularly communicate about how to improve it. For example, *“We need to have a feedback loop through the people who are manning our website to say, by the way, this is what we need to do on a regular basis to make sure that the website is relevant to the developments that are taking place”* (S8).

Trust/credibility: Chairpersons suggested making the content available in multiple South African languages, including sign language and Braille.

Chairpersons suggested more media partnerships and the media release page on the site needs to display all the activities they are involved in. For example, *"The website has got a media release page and drone council is involved in quite a few things at the moment, but from the website you would not know about it"* (S7).

Appearance: Chairpersons suggested the use of infographics as to make the information on the site more palatable to members. For example, *"I think video content will be quite important, more infographics, especially for the younger generations so that it's easier for them to digest the content"* (S4).

Loyalty: To improve loyalty chairpersons said that the sites information/content needs to be fine-tuned and tailored because it needs to be able to communicate to prospective or existing members. For example:

It will have to be tweaked and customised to all potential clients. It can't just be preaching to the converted it needs also to be able to in terms of the user experience, it must be broadened up and wide enough to be able to provide anyone who look at our website with a relatively average or above average level of satisfaction (P8).

4.4 Summary of the findings

Several significant themes emerged from the data collected around the UX of the website. The findings show that both current members and staff are concerned with the user experience of the DCSA website. While the website is simple and relatively easy to navigate (indicating positive feedback against the appearance metric), the feedback was less positive for the usability, credibility/trust, and loyalty metrics. The main UX concerns relate to a shortage of relevant information for members and prospective members. It is clear from the staff and member suggestions that more needs to be done to improve the quality of the user experience overall by improving each of the four aspects that impact the user experience (usability, trust/credibility, appearance, and loyalty) (Sauro, 2018).

The next chapter will discuss and interpret the findings in relation to the literature reviewed in Chapter Two.

CHAPTER 5. DISCUSSION OF THE FINDINGS

5.1 Introduction

This chapter presents the discussion of the findings shown in the previous chapter and the results are explained with reference to the literature reviewed in Chapter Two. While there are several “variables that impact the quality of a website experience, previous research has identified four of the most common dimensions: usability, trust/credibility, loyalty, and appearance” (Sauro, 2015b, p.120). The discussion will be guided by making use of the study’s proposition one and two. For ease of reference, the propositions are again stated:

Proposition 1: *The current UX of the digital platform (website) of a membership-based entity in South Africa can be evaluated using a framework of qualitative attitudinal/retrospective benchmarking metrics.*

Proposition 2: *The user experience evaluation of the current digital platform (website) for a membership-based entity in South Africa can be used to suggest high-level user experience improvements for members and prospective members.*

5.2 Discussion pertaining to Proposition 1

5.2.1 Usability

Usability is related to how easy it is to use a website and a measure of how simple it is for a user to undertake a task productively, competently, rapidly, and sufficiently (Schroeter, 2021). Nielsen (2012) defines usability by five qualities: learnability, efficiency, memorability, errors, and satisfaction. The findings around usability in this case study are structured around these qualities:

Learnability refers to the extent that users can complete a specific activity and achieve a specific objective in a short space of time for the first time (Nielsen, 2012). Prospective member's learnability of the DCSA website was hindered because of issues with the application process, often members were not able to complete the application process correctly and completely the first time. The link to the "Join" button was broken on some pages and some members struggled to access the application form. Those who did manage to access the form complained that they could not upload the documents that the application form required. Therefore, learnability of the site is low when it comes to the application process and this area needs to be improved.

Efficiency refers to when users can learn how to use the system as quickly and easily as possible (Nielsen, 2012). The rate at which members could quickly use the website and perform tasks in a speedy manner was also negatively affected by the issues described above regarding the application process. Therefore, members were not able to perform the application tasks in a timely manner. It also appeared that there was limited support for users when they ran into usability issues, as one member described not receiving any responses to messages posted on the website. However, as there was not a great deal of information on the site, most members indicated that they could navigate the rest of the site efficiently.

Memorability refers to how well users can recall different functions after a period of not using the site (Nielsen, 2012). During the interview, members were asked to revisit the site. For many this was after a period of not using it for a while. Yet, members were able to successfully re-establish proficiency. While this may be influenced by the site containing limited information or features, the site's memorability can be considered to be satisfactory.

Errors refers to the number of severity of errors from the system (Nielsen, 2012). Several members reported errors such as the call-to-action buttons and the membership links not working. For example, when members clicked on the "Join Now" button, they received an error code instead of an online application form. These errors need to be fixed because they may hinder membership growth.

Satisfaction refers to the gratification that a user gets from using a website (Nielsen, 2012). Some members perceived the website as not being monitored as contact form messages were not responded to. Therefore, members were not satisfied with the usability of the site when it came to the application process, broken membership links and the Council not responding to the messages they left via the contact form.

There appears to be some disconnect regarding the usability of the website between members and employees. When the staff were asked about the usability of the site, they reported that the website is easy to use and navigate. It appears that the chairpersons who oversee their respective chambers were often unaware of the usability issues that their members experienced. The pattern of members and staff having differing user experiences will be explored later in this chapter.

5.2.2 Trust/credibility

Credibility is defined as the believability or trustworthiness of information found on a site, which means “the degree to which users believe the content in a website” (Al-Omar, 2016, p. 356). Nielsen (as cited in Harley, 2016, para. 2) provided four methods in which websites can convey trustworthiness: design quality, up-front disclosure, comprehensive and current content, and connection to the rest of the web. Each of these components regarding the trust/credibility of the DCSA website will be discussed.

Design quality - A site must have professional appearance, feel reliable, have clear navigation, and convey regard for clients and an unspoken promise of good service (Harley, 2016). Members in this study found that the site had a professional appearance. They found the website to be attractive and considered it to have a clean and simple presentation, which appealed to them. However, broken links and errors were disappointing to members and, according to Harley (2016), errors or problematic navigation may convey a disregard for users.

Comprehensive, correct, and current content - A site must have detailed information that is correct and current because it displays proficiency and ability (Harley, 2016). Harley (2016) suggests that users value sites that have

considerable and relevant content because it displays that the organisation is knowledgeable and devoted to assisting its users. Members in this study expressed that the website lacked integral information about the membership categories, which led them to question the site's credibility. Members also expressed their dissatisfaction with site's outdated content. Some members felt that the information on the site was not specific enough for the DCSA, or that the information was not customised to their needs but rather functioned as a general marketing tool. This finding seems to have been supported by employees as well.

The combination of a lack of information and outdated information led members to infrequently visit the website and question the site's trust and credibility. McKnight and Kacmar (2007) and Lieberman (2019) stress that if consumers believe that a website's information is irrelevant, old, or not credible, they are not likely to act on the information found and will not develop loyalty to the website. The lack of information and outdated information may leave a consumer wondering whether the website directly translates to how business is conducted (Lieberman, 2019). The members and staff interviewed had the same concern regarding the inadequate member information provided for each chamber. It appeared that often chairpersons did not know exactly who their members were and were unsure of their member's needs.

The Walters Hierarchy of emotional design argues that a digital product's design must be primarily practical first, before it can be dependable or operational, to fulfil the user's necessities (Ritter & Winterbottom, 2017, p.62). The challenges for DCSA members regarding the application process, limited information, and a lack of response to the contact form messages means that website currently did not fulfil their basic needs. This led some members to conclude that the site is not monitored and a feeling of emotional detachment from the organisation. Ritter & Winterbottom (2017) argue that humans develop trust and emotional connection through feedback. The lack of current interaction between members and chairpersons (through the website and other channels) may mean that members are unlikely to develop trust in the organisation, leading to reduced membership retention.

Upfront disclosure - The site must be transparent and disclose all information to its users (Harley, 2016). A concern for some members was that there is no mention of the membership fee and benefits on the website. Currently the process for membership application is lengthy and unclear for prospective members, with fee information only available once the application process has started. One chairperson described it as such:

I would then receive an email to say [name] with this particular background is interested in this chamber and so forth and then I will make up a follow up. [...] I will then call you and then tell you "Welcome to the chamber, but you are not a full member because you've not paid. This is the subscription fee for how much and for this long" (S6).

According to Harley (2016), users prefer websites that are upfront with all the information that relays to the client. Making significant information simple to attain on the site augments the feeling of transparency and demonstrates that an organisation knows their customers. A concern with the current website is echoed by Harley's (2016) warning that users do not like having to fill in time-consuming forms only to find out about fees at the end.

Connected to the rest of the web - An organisation should link to third party sites because it is a sign of confidence and credibility to users (Harley, 2016). The website does have links to third party sites such as news outlets. However, the links do not appear to have been updated since 2020. There are no social media links to the organisation's social media platforms on the website and there are no member testimonials. According to Harley (2016), customer reviews and testimonials are important because users like to read such reviews to assist in deciding whether to use the product or service and to verify the credibility. Another aspect relating to credibility was a lack of clear mandate or authority on the website. One member noted:

One of the things that needs to be addressed is that there is no mandate, or the drone council mandate and authority is not clear on that website. So, although the information seems to be credible because government

ministers were part of the launch, the mandate and authority, and why the drone council does business is not on the website (M8).

5.2.3 Appearance

According to the Affandy et al. (2018), key web aesthetic metrics are website attractiveness, clear content, organisation, and simple presentation. Members felt that the DCSA website is attractive, the site has a standard design, and the layout was visually appealing, and this was supported by interviewed staff. Members found the presentation of the website clean and simple as it was not complicated. However, members found that DCSA website was out-of-date (for example, images of board members who had left some time ago). Therefore, not updating the website's appearance not only influences perceived credibility but also reaffirms members perception that the site is outdated and not monitored. Members and employees articulated that the website needed an upgrade to make it more visually appealing and contemporary. According to Thorlacius (2007), the aesthetic effects should be customised to the target audience. The aesthetic effects of the DCSA need to be upgraded to convey something more substantial in terms of function, content, and customisation towards the drone industry, the membership chambers, and prospective members.

5.2.4 Loyalty

According to Garrett (2006), customers become loyal because of the positive experiences the customer ultimately has with the organisation's product and/or service as it is essential to building customer loyalty. The user experience was inadequate because members reported they only visited the website once or twice, mainly to complete the application process but hardly returned to the website. However, there is some potential because some members expressed their willingness to return if the Council regularly added new and relevant content.

The DCSA NPS score was calculated to consider membership loyalty. The DCSA NPS score was -63 which means it had more detractors than passives and promoters. A few members were passive (13% of interviewed members were

satisfied with the service) and a few were promoters (13% of interviewed members were optimistic about the service). However, most members received poor experience or were detractors (75% of interviewed members were negative about the service). Most members who are detractors stated they were not likely to recommend the website because they struggled with the application process or were dissatisfied with the outdated information. This means that customer loyalty is likely to be low.

5.3 Digital Customer Experience Gap (CX)

The analytical framework provided in Chapter 2 provided support for the study objectives and clarifies the context of the study and the findings. However, during the analysis phase of the study, a gap between what members want and what the organisation's website provided was an emerging or underlying theme that kept recurring from the data collected. Therefore, an additional element has been added to the analytical framework and that is to evaluate the findings according to the digital customer experience gap. This model is shown in Figure 10.

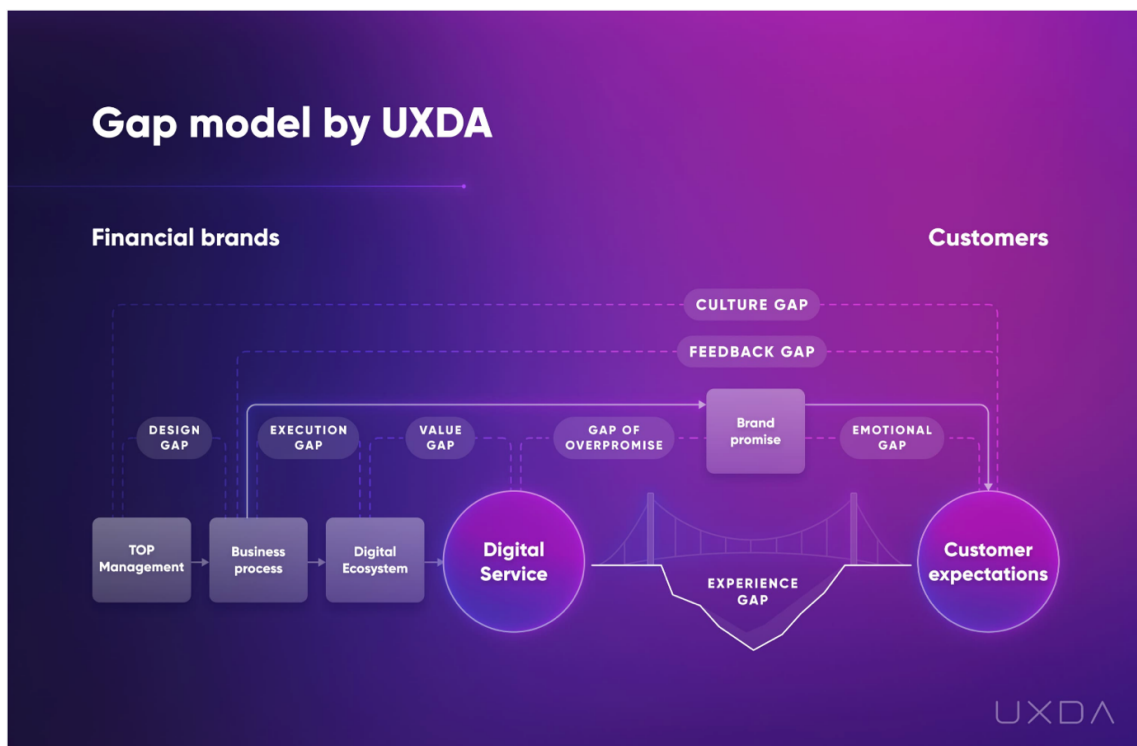


Figure 10: Gap Model by UXDA (Kreger, in press, p. 5).

The Customer Experience (CX) gap is fundamentally the gap between what users want and what organisations delivers. It is the consequence of a brand failing to meet expectations at any point across the customer journey (Kreger, in press). Gaps continue to be undiscovered if customers have no opportunities of communicating their dissatisfaction with the organisation and may continue to inconvenience and frustrate the customer if their feedback is not directed to the correct team (Gardner, 2019). According to Bain and Company (as cited in Kreger, in press, p. 3), “80% of CEO’s think that they provide a superior experience, while only 8% of customers can agree to that”. Kreger (in press) explains that the main challenge in closing the gap is that the higher the hierarchy level, the greater the obliviousness of the experience gap. However, the source of the gap is typically discovered at the top of the hierarchy. The lower in the hierarchy, the more regularly employees observe difficulties and gaps, but they may not have the seniority or capability to remove them, they can be suppressed by culture (Kreger, in press).

There appear to be digital CX gaps between the members and the Council. Internally, while chairpersons may be aware of these gaps, they may not have the power to remove them. For example, chairpersons do not have easily accessible up-to-date membership information, leading to a disconnect with member needs. The digital customer experience gap might be caused by shortcomings in one or more of the seven levels (culture, feedback, execution, design, value, brand promise and emotional connection (Kreger, in press, p. 5). Table 10 presents the gap levels, definitions, and examples of how the gap is reflecting in this case study.

Table 10: Gap levels, definition, and case example

GAP LEVEL	DEFINITION	EXAMPLE
The culture gap	The absence of customer-centricity at the level of culture stops employees from delivering services closer to customer expectations and causes a “culture gap” (Kreger, in press).	Chairpersons responsible for their respective chambers do not have up-to-date membership information to work closely with their members. This can result in a “culture gap” with the members’ expectations.
The feedback gap	Shortage of information about customer expectations and their experience with a product or service produces a gap of feedback (Kreger, in press).	Members complained that they left messages via their contact form and did not receive a response. However, members should be able to reach out to chairpersons via email to reduce this gap.
The design gap	Not having the correct expertise to design a system to meet customer expectations (Kreger, in press).	The DCSA website is not responsive and has broken links. When you click on the <i>Join Now</i> button an error code appears instead of an application form. These UX errors need to be addressed.
The execution gap	If user-centred product design is not given sufficient attention then it will be of poor quality and usability (Kreger, in press).	Members reported that they feel that the website is largely used as a marketing tool rather than member-centred site.
The value gap	The irregularity between the perceived value of a service and the real value. The gap can develop if the design ecosystem is not meeting user demands (Kreger, in press).	Chairpersons expressed that some members leave the organisation because they see very little activity or value as members. The Council does not appear to meet members expectations.

Gap of overpromise	If an organisation promises or guarantees something that the product or service is not able to provide, it will lead to even greater displeasure in user's expectations (Kreger, in press).	Some members depart from the organisation. <i>"A number of people that had joined didn't see anything happening because we're still designing courses, etc and therefore, some of the people have left" (S5).</i>
Emotional gap	Brand communication is informational and concentrated on rational value instead of including emotional value. This means that an emotional connection with users cannot be cultivated (Kreger, in press).	The website is devoid of encouraging an emotional connection with members. The information is not perceived as unique or specific to members, with some members feeling that the communication is not geared towards them.

5.4 Discussion pertaining to Proposition 2

The purpose of this section is to use the findings of the user experience evaluation (guided by the four quality components) used to measure UX of the website to suggest high-level user experience improvements for members and prospective members. The discussion will also suggest improvements to reduce the digital CX gap. From the research findings, a high level one-page UX Strategy based on a User-Centred Design Canvas is proposed. The UX Strategy will feature user and business-related issues and resolutions that aims to deliver a more intuitive user experience for members and prospective members.

5.4.1 *Improved Usability*

The following are member and staff suggestions pertaining to improving the user experience of the website by enhancing the usability, aligned to Nielson's (2010) qualities of usability:

- Improved learnability and efficiency: The membership application process needs to be redesigned and simplified so that users have the requisite information to apply to become a member successfully the first time, with few steps required to do so. A suggestion by a chairperson is that new and returning members could pay their membership fees through an online payment processing system to simplify and shorten the application process. Currently the application process takes days because of the delayed payment system.
- Reduction of errors: Any broken website links, such as the *Join* button, need to be rectified because errors may prevent prospective members from joining.
- Improved satisfaction: Website support to monitor website messages so that members receive a timely response when they send a message through the website.

5.4.2 *Improved Trust/Credibility*

Trust and credibility on the website can be improved, according to guidelines from Nielsen (as cited in Harley, 2016):

- Website connectedness: Relevant links to third-party sites need to be visible remain up to date. The Council's social media links should integrate to the site especially because chairpersons believe this to be a preferred method of communication for some of their target audiences (interns and students).
- Correct and current information provided: Information needs to be transparent to prospective and current members, such as annual membership fees and membership benefits. The addition of membership category information will help prospective members in knowing which chamber to join, what each chamber does and the benefits and value of becoming a member. The addition of membership reviews or testimonials will help establish credibility (Ritter & Winterbottom, 2017).

5.4.3 *Enhanced Appearance*

While the current website is attractive and simple, the following are suggestions pertaining to improving the appearance of the site with the aim of improving the user experience, according to guidelines by Thorlacius (2007):

- Aesthetic effects: Any aesthetic effects must support the content and functional aspects of the website and relate to the drone industry (Thorlacius, 2007).
- Customisation for target audiences: The aesthetics effects need to be appealing to specific target audiences (Thorlacius, 2007), such as academic institutions, students, and the youth.

5.4.4 Promoting Loyalty

The following are suggestions pertain to improving the user experience of the website related to loyalty:

- Improving the NPS: The Council needs to engage with detractors and use this feedback to point out areas where the organisation and staff can improve the UX.
- Increased interaction and feedback: It is suggested to conduct regular customer satisfaction surveys with members and use this feedback to inform UX decisions.

5.4.5 Reduce the Digital Customer Experience Gap

The following suggestions are made to reduce the digital CX gap:

- Reduce the culture gap: Implement a level of customer-centricity that supports its staff to bring services to members expectations. Chairpersons need access to up-to-date member information.
- Reduce the feedback gap: The website needs to be monitored and a feedback loop needs to be established. Interactions between members and chairpersons need to take place more often.
- Reduce the design gap: Hire or utilise existing expertise that can design user experiences that can align the website to member expectations.
- Reduce the emotional gap: Current content seems somewhat detached from members and their needs. New content needs to meet member's needs. The Council can look to generate emotionally valued content that produces positive associations for members.

5.4.6 Proposed high-level UX Strategy

This section will propose a high-level UX strategy from the findings made. The User-Centred Design Canvas (UCDC) is a UX tool that will be used to help formulate a UX Strategy. UCDC enables a comprehensive examination of user's

research and business main goals in a one-page canvas model (Prelicz-Zawadzka, 2016). The UCDC structure is divided into nine fields that signify specific categories of information about the users and the company's product (Prelicz-Zawadzka, 2016).

The centre of the canvas user field first considers the business and the users (Prelicz-Zawadzka & Zawadzki, 2016). For this case study, the following is considered:

1. **Business** (a brief description of the organisation and service offered): The Council aims to support and grow the drone industry in South Africa. It offers membership-based annual subscriptions catered to different types of members.
2. **Users** (potential or existing members): This consists of the 10 membership categories including drone pilots, students, universities, manufacturers etc.

The left-side of the canvas focuses on the users and considers the user problems, motives, and fears (Prelicz-Zawadzka & Zawadzki, 2016):

3. **Problems** (current challenges users experience): Current UX challenges include that the application process is difficult, there are multiple broken links, information is minimal or outdated and the process for payments is delayed. The website is not monitored because members questions or queries sent via the site's contact form received no responses. There are no links to third party sites and no social media links. The aesthetic effect is not adapted to the target audience and does not support the content and functionality of the site. Regarding loyalty, 75% of interviewed members are detractors who are dissatisfied with the service.
4. **Motivations** (drivers that motivate users): Members want exposure to the drone industry and are looking for the Council to facilitate opportunities such as drone manufacturing and repairs, information, training, and networking.

5. **Fears** (concerns when using the service): Members are concerned about revealing personal information online, unclear about membership fees and who else is using the site or if someone will respond to their queries.

The right side of the canvas contains information about the business: solutions to the problems, alternative competition that users can gravitate to and competitive advantages that can make it be distinct from the competition (Prelicz-Zawadzka, 2016).

6. **Solutions** (ways to fix the problems stated in (3)): Reduce website errors, improve efficiency and satisfaction. Include an e-commerce platform to facilitate the payment of membership fees. Provide correct and update information on the site. Improve loyalty by engaging with detractors and conduct surveys to gain feedback on what improvements the organisation can make to improve user experience. Aesthetic affects need to be customised to the organisation target audiences (such as academic institutions, students, and youth). Reduce the cultural and emotional gaps by implementing higher customer centricity that supports staff to bring services closer to members expectations.
7. **Alternatives** (alternatives to the organisation's service): There are three possible alternative organisations that provide similar services to the DCSA: Commercial Aviation Association Southern Africa (CUAASA) (<https://www.caasa.co.za/>) provides a platform for members of the drone industry. African Drone (<https://africandrone.org/>) is an organisation that seeks to empower local drone pilots through skill and development resource sharing. Women and Drones (<https://womenanddrones.com/wd-africa/>) is an organisation that exists to inspire and support African woman to participate in the drone industry.
8. **Competitive Advantage** (features of the service that make it stand out): Membership categories are very extensive covering most sectors. The Council has a database of both established new entrants and new licensees. The Council has been requested by government to give input in the Digital Economic Masterplan of South Africa (Phenyane, 2021).

The final consideration is the Unique Value Proposition that keep users at the very heart of the strategy (Prelicz-Zawadzka & Zawadzki, 2016):

9. **Unique Value Proposition** (a guarantee to users): The objective is to facilitate growth of the South African drone economy by bring services closer to members needs and expectations. The Council aims to help members find it easier to operate, network, grow, train, and develop skills and acquire knowledge in the drone industry.

As shown in Figure 11, a one-page UX strategy based on the User-Centred Design Canvas is proposed, based on the research findings.



Figure 11: Proposed high-level UX Strategy (User-Centred Design Canvas)

5.5 Conclusion

The research evaluated the user experiences of the case study's website by evaluating members' perceptions and experiences around the following components of the site: usability, trust/credibility, appearance, and loyalty. The findings of the research revealed that loyalty is a key concern. There was an overwhelmingly majority of detractors as most members interviewed are dissatisfied with their experience of the website. This means that most members interacting with the service are having a poor experience across the quality components of the site. This seems to be exacerbated by chairpersons of the respective membership chambers not having easy access to up-to-date member information. Furthermore, the research found that there is a digital customer experience gap between what the members want and what the website currently provides, resulting in the Council failing to meet expectations across the customer journey. Based on the suggestions provided by members and staff, recommendations were made to improve the UX of the website going forward. From these research findings, a high level UX strategy was proposed to improve the user experience of the website. The next (and final) chapter will concentrate on deductions and conclusions from the research and make recommendations for future research.

CHAPTER 6. CONCLUSIONS & RECOMMENDATIONS

6.1 Introduction

This chapter focuses on summarising the findings of this study by presenting the conclusions and the recommendations of the research. The purpose of this study was to evaluate the user experience of the digital platform (website) of a membership-based entity and to consider how to improve member's digital experiences. This is seen to increase and sustain membership by using a member centric user experience design. Current members and staff were interviewed using interview protocols to evaluate the experiences and perceptions of the website. From the findings, the study proposed a high level UX strategy for the organisation to consider improving the UX of the website, and thus aiming to retain and increase membership.

6.2 Conclusions regarding objective 1

The first research objective was to evaluate the UX of the digital platform (website) of a membership-based entity in South Africa. The research objective was answered based on qualitative data collected from members and employees. The following quality components were used to evaluate the user experience of the website: usability, trust/credibility, appearance, and loyalty. The findings indicated that members provided positive feedback around the UX quality component of appearance, but expressed negative feedback regarding all the other components, namely usability, trust/credibility, and loyalty. Additionally, the findings indicated the majority of members interviewed are dissatisfied with the service, while employees reported that some members have not renewed their membership because they see little to no value in the service. A major finding from the study is that there is a digital CX gap between the members and the website, and that the Council is failing to meet their member's expectations. Overall, the findings showed that the user experience of the DSCA site is poor,

and the outdated and limited content means that members do not regularly return to the website. Therefore, there are opportunities to improve the UX of the website.

6.3 Conclusions regarding objective 2

The second research objective was to propose recommendations for a revised UX design strategy for the digital platform (website) of a membership-based entity in South Africa, based on the findings of Objective 1. The aim of this objective is to create a more intuitive user experience for members and prospective members. The study has proposed recommendations for improving the user experience related to improving usability, improving credibility, enhancing appearance, and promoting loyalty.

Additionally, several suggestions have been made to reduce the current digital CX gap. The study has proposed a high level UX strategy for the website, using a one-page User-Centred Design Canvas. The UX strategy addresses the concerns and challenges faced by members and proposes solutions towards providing a more intuitive user experience for members and prospective members using the website. It is expected that the implementation of the UX suggestions and proposed high-level UX strategy may assist to improve the UX of the website, helping to retain existing members and increase new membership.

6.4 Recommendations

The following recommendations are based on the UX strategy results from the research study and conclusions. Appendix F shows high level screen mock-up examples for some of the recommended changes, one for each quality dimension, for illustrative purposes.

6.4.1 *Improved Usability*

The following recommendations are pertaining to improving the user experience of the website by enhancing the usability, aligned to Nielsen's (2010) qualities of usability:

- **Improved learnability and efficiency:** The membership application process needs to be redesigned and simplified so that users have the requisite information to apply to become a member successfully the first time, with few steps required to do so. At the moment the application process takes days because of the delayed payment system.
- **Reduction of errors:** Any broken website links, such as the *Join* button, need to be rectified because errors may prevent prospective members from joining.
- **Improved satisfaction:** Website support to monitor website messages so that members receive a timely response when they send a message through the website.

6.4.2 *Improved Trust/Credibility*

Trust and credibility on the website can be improved, according to guidelines from Nielsen (as cited in Harley, 2016):

- **Website connectedness:** Relevant links to third-party sites need to be visible remain up to date. The Council's social media links should be integrated to the site especially because chairpersons believe this to be a preferred method of communication for some of their target audiences (interns and students).
- **Correct and current information provided:** Information needs to be transparent to prospective and current members, such as annual membership fees and membership benefits. The addition of membership category information will help prospective members in knowing which chamber to join. The addition of membership reviews or testimonials will help establish credibility (Ritter & Winterbottom, 2017).

6.4.3 *Enhanced Appearance*

While the current website is attractive and simple, the following are suggestions pertaining to improving the appearance of the site with the aim of improving the user experience, according to guidelines by Thorlacius (2007):

- **Aesthetic effects:** any aesthetic effects must support the content and functional aspects of the website and relate to the drone industry (Thorlacius, 2007).
- **Customisation for target audiences:** The aesthetics effects need to be appealing to specific target audiences (Thorlacius, 2007), such as academic institutions, students, and the youth.

6.4.4 *Promoting Loyalty*

The following are suggestions pertain to improving the user experience of the website related to loyalty:

- **Improving the NPS:** The Council needs to engage with detractors and use this feedback to point out areas where the organisation and staff can improve the UX.
- **Increased interaction and feedback:** It is suggested to conduct regular surveys with members and use this feedback to inform UX decisions.

6.4.5 *Reduce the Digital Customer Experience Gap*

The following suggestions are made to reduce the digital CX gap:

- **Reduce the culture gap:** Implement a level of customer-centricity that supports its staff to bring services to members expectations. Chairpersons need access to up-to-date member information.
- **Reduce the emotional gap:** Current content seems somewhat detached from members and their needs. New content needs to meet member's

needs. The Council can look to generate emotionally valued content that produces positive associations for members.

6.5 Suggestions for further research

The research focused on the Drone Council South Africa as a case study. However, further research is required around this case and for similar membership-based entities in South Africa in the drone industry and other industries. The research could be furthered to evaluate the impact of implementing the suggested UX design changes and evaluate if the proposed UX strategy is effective. For example, a future research objective could be to assess the impact of the proposed UX strategy on the organisation's membership growth and retention. After the changes have been affected, more quantitative usability studies could be conducted that test the updated website with representative users. Additionally, the user experience of other digital platforms of the membership-based entity could be investigated, such as social media platforms. This could take place as a potential study on its own or part of a broader digital transformation study.

Table 11 provides an overview of the alignment of the research questions, propositions, data collection and data analysis through a consistency table.

Table 11: Consistency table: research questions, propositions, data collection and data analysis.

RQ #	Research Objective #	State Research Objective	Prop #	State Proposition	Data collection detail	Data analysis method
1	Objective 1	Evaluate the current UX of the digital platform (website) of a membership-based entity in South Africa.	1	The current UX of the digital platform (website) of a membership-entity in South Africa can be evaluated using a framework of qualitative attitudinal/retrospective benchmarking metrics.	Member Interview guide questions 1, 2, 3, 4, 5, 6, 7, 8 Staff Interview guide questions 1, 2, 3, 4, 5, 6, 7, 8, 9 10, 11, 12, 13, 14	Thematic analysis
2	Objective 2	Propose a high-level UX design strategy for the digital platform (website) of a membership-based entity in South Africa in order to create a more intuitive user experience for members and prospective members.	2	The user experience evaluation of the current digital platform (website) for a membership-based entity in South Africa can be used to suggest high-level user experience improvements for members and prospective members.	Member Interview guide questions 1, 2, 3, 4, 5, 6, 7, 8 Staff Interview guide questions 1, 2, 3, 4, 5, 6, 7, 8, 9 10, 11, 12, 13, 14	Thematic analysis

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APPENDIX A: The participant information sheet



Member Participant Information Sheet

Dear Prospective Participant

My name is Thembela Ndesi, and I am a master's student in Digital Business in the Wits Business School at the University of the Witwatersrand. As part of my studies, I am undertaking a research project under the supervision of Dr Greig Krull. My research study is entitled "User Experience of a South African membership-based organization website". This research aims to evaluate the UX strategy for the digital platforms of a South African membership-based entity, where the Drone Council of South Africa will be a case study.

I am inviting you to participate in a semi-structured online interview.

You have been invited to participate, as you are a member of the Drone Council of South Africa. The interview will consist of open-ended questions about how you experienced the Council's digital platforms (website and social media), if you find the content on the digital platforms relevant for your needs, and how often you visit these platforms. The interview will take 30-45 minutes. With your permission, the interview will be audio and video recorded. The interview will be conducted online (using Zoom or Google Meet) if you have sufficient data or connectivity. Should your data or internet connectivity be limited, then the interviews may be conducted via the telephone instead (at no cost to you).

There will be no personal costs to you if you participate in this study, except that you may have to cover your Internet costs for the online interviews. You will not receive any direct benefits from participation but there are no disadvantages or penalties if you do not choose to participate or if you withdraw from the study. The study is voluntary, and you may withdraw at any time or not answer any question if you do not want to. The interviews will be conducted confidentially, and I will not be asking for any identifying information. The information you give to me will be held securely and kept confidential. Any personal information will not be disclosed to anyone else. I will be using a pseudonym (false name) to represent your participation in my research report. If you experience any distress or discomfort at any point in the research process, we will stop the interview or resume another time.

If you have any questions during or afterwards about this research, feel free to contact me on the details listed below. The results of the study will be written up as a research report. The data collected from this research study will be stored in a password protected computer in a restricted access building and will be kept for a period of five years and thereafter destroyed. This study has received approval from University Human Research Ethics Committee (Non-Medical).

Thank you for taking time to read this information sheet and for your interest in participating in this study.

Thank you.

Thembela Ndesi, 0614233j@students.wits.ac.za, 072 841 6242



Staff Participant Information Sheet

Dear Prospective Participant

My name is Thembela Ndesi, and I am a Master's student in Digital Business in the Wits Business School at the University of the Witwatersrand. As part of my studies, I am undertaking a research project under the supervision of Dr Greig Krull. My research study is entitled "User Experience of a South African membership-based organization website". This research aims to evaluate the UX strategy for the digital platforms of a South African membership-based entity, where the Drone Council of South Africa will be a case study.

I am inviting you to participate in a semi-structured online interview.

You have been invited to participate, as you are a staff member of the Drone Council of South Africa or a key stakeholder of the Council. The interview will consist of open-ended questions about the support provided to members, the role and design of the Council's digital platforms (website and social media), what content is promoted on the digital platforms and how it is used. The interview will take 30-45 minutes. With your permission, the interview will be audio and video recorded. The interview will be conducted online (using Zoom or Google Meet) if you have sufficient data or connectivity. Should your data or internet connectivity be limited, then the interviews may be conducted via the telephone instead (at no cost to you).

There will be no personal costs to you if you participate in this study, except that you may have to cover your Internet costs for the online interviews. You will not receive any direct benefits from participation but there are no disadvantages or penalties if you do not choose to participate or if you withdraw from the study. The study is voluntary, and you may withdraw at any time or not answer any question if you do not want to. The interviews will be conducted confidentially, and I will not be asking for any identifying information. The information you give to me will be held securely and kept confidential. Any personal information will not be disclosed to anyone else. I will be using a pseudonym (false name) to represent your participation in my research report. If you experience any distress or discomfort at any point in the research process, we will stop the interview or resume another time.

If you have any questions during or afterwards about this research, feel free to contact me on the details listed below. The results of the study will be written up as a research report. The data collected from this research study will be stored in a password protected computer in a restricted access building and will be kept for a period of five years and thereafter destroyed. This study has received approval from University Human Research Ethics Committee (Non-Medical).

Thank you for taking time to read this information sheet and for your interest in participating in this study.

Thank you.

Thembela Ndesi, 0614233j@students.wits.ac.za, 072 841 6242

APPENDIX B: Participant agreement form

UNIVERSITY OF THE
WITWATERSRAND
JOHANNESBURG



Consent Form

Title of Research Study: User Experience of a South African membership-based organization website.

Name of Researcher: Thembela Ndesi

Name of Supervisor: Dr Greig Krull

I (*full name*) agree to participate in this research study. The research has been explained to me and I understand what my participation will involve.

I have received a copy of the participant information sheet	YES	NO	(please select)
I agree to participate in an online interview	YES	NO	
I agree that my participation will remain confidential	YES	NO	
I agree that the researcher may use anonymous quotes in the research report	YES	NO	
I agree that the interview may be audio recorded	YES	NO	

..... (Participant signature)

..... (Participant name)

..... (Date)

Consent Form

Page 1 of 1

APPENDIX C: Research Instruments

Research Instrument: Members Semi-Structured Interview Protocol

Participant Number:	Interview Date:
Interview Time:	Interview Tool:

Members of the organisation

General

1. What category of member of the Drone Council are you?
2. How long have you been a member and why did you become a member?
3. How often do you use the Drone Council's website?

Usability

4. Is the Drone Council's website easy to use? Why?
5. Is the Drone Council's website easy to navigate? Why?

Trust & Credibility

6. Do you find the information on the Drone Council's website is credible? Why?
7. Do you think there is enough related content or information designed for your specific membership category and is it trustworthy?

Appearance

8. Do you find the Drone Council's website attractive? What improvements could you suggest?
9. Do you find the Drone Council's website has a clean and simple presentation? Why?

Loyalty

10. Would you likely return to the Drone Council's website in the future?
11. How likely are you to recommend this website to a prospective member? Why?

Not at all Likely					Neutral						Extremely Likely
0	1	2	3	4	5	6	7	8	9	10	
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	

12. Do you have any general comments to add?

Research Instrument: Staff Semi-Structured Interview Protocol

Participant Number:	Interview Date:
Interview Time:	Interview Tool:

Interview: Board members, chamber directors and stakeholders**Business (Questions 2-3 for senior leaders only)**

1. What is your role in the Drone Council of South Africa (DCSA)?
2. How many members do you have in the different categories?
3. What are the short- and long-term business goals around membership?

Members

4. What is the process of joining? How long will it take to become a member? What is the benefit?
5. How would you describe your members and their needs?
6. Which members are prioritised and why?
7. What are some surprising insights you've gained from working with these members?
8. How do you go about attracting new members and keeping existing members?

Website

9. What is the purpose of the Drone Council website?
10. How has the Drone Council website been setup and what information does it provide?
11. Do you think the Drone Council website is easy to use and navigate? Why?
12. Do you think there is enough related content or information designed for specific membership categories?
13. What improvements do you think could be made to improve the user experience of the website?
14. Do you have any general comments to add?

APPENDIX D: Ethics Clearance Certificate

Graduate School of Business Administration
University of the Witwatersrand, Johannesburg



Wits Business School Ethics Committee

Constituted under the University Human Research Ethics Committee (Non-Medical)

Ethics Clearance Certificate

Ethics protocol number: WBS/DB0614233J/731

This certificate is only valid with a legitimate ethics protocol number and signed by the Researcher (below).

Project title	User experience of a South African membership-based organization website
Investigator / Researcher	Ms Thembela Ndesi
Nature of Project	MM (Digital Business)
Decision of the Committee	Approved, provided stakeholders and participants are guaranteed confidentiality.
Issue Date of Certificate	2022-09-02
Expiry date	Date of submission of the project / research report
Chairperson	Prof Anthony Stacey ☎ +27 11 717 3587 📱 +27 82 880 4531 ✉ anthony.stacey@wits.ac.za

Declaration by Researcher

One copy must be signed by the Researcher and returned to the Chairperson of the Wits Business School Ethics Committee.

I fully understand the conditions under which I am authorized to carry out the abovementioned research and I guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I undertake to resubmit the protocol to the Committee.

Signature

Date:

APPENDIX E: Permission letter received from DCSA



Drone Council of South Africa (NPC)

Reg: 2020/427876/08

P.O. Box 55 Sunninghill West, 2157

Tel: 010 312 6726 Cell: 083 379 4601

Email: info@dronecouncil.africa

Web: www.dronecouncil.africa

05 May 2022

Miss Thembela Ndesi
MM in Digital Business
Student No : 0614334J

SUPPORT IN DATA COLLECTION FOR YOUR MMDB: DRONE ECONOMY RESEARCH

The Drone Council SA has signed an agreement with Wits Business School, amongst others, to sponsor bursaries for 10 Masters and/or PhD students.

We have a national committee, hundreds of members and 10 official chambers. We hereby confirm that Ms Ndesi will be supported to collect the data relevant for her studies.

Through various facilitation mechanism in our structures, we have further agreed to support the entire Drone Economy research cohort throughout their studies.

Kind regards

A handwritten signature in black ink, appearing to read "Irvin Phenyane".

Irvin Phenyane

Chairperson

083 379 4601

APPENDIX F: Example UX mock-up suggestions

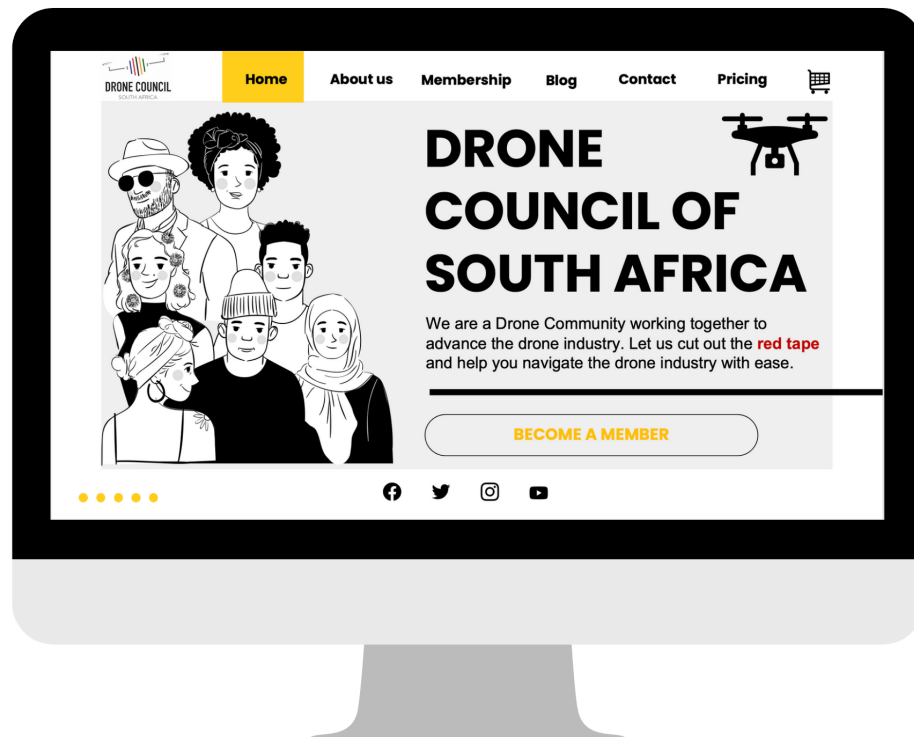


Figure 12: Improved appearance mock-up (aesthetic functionality)

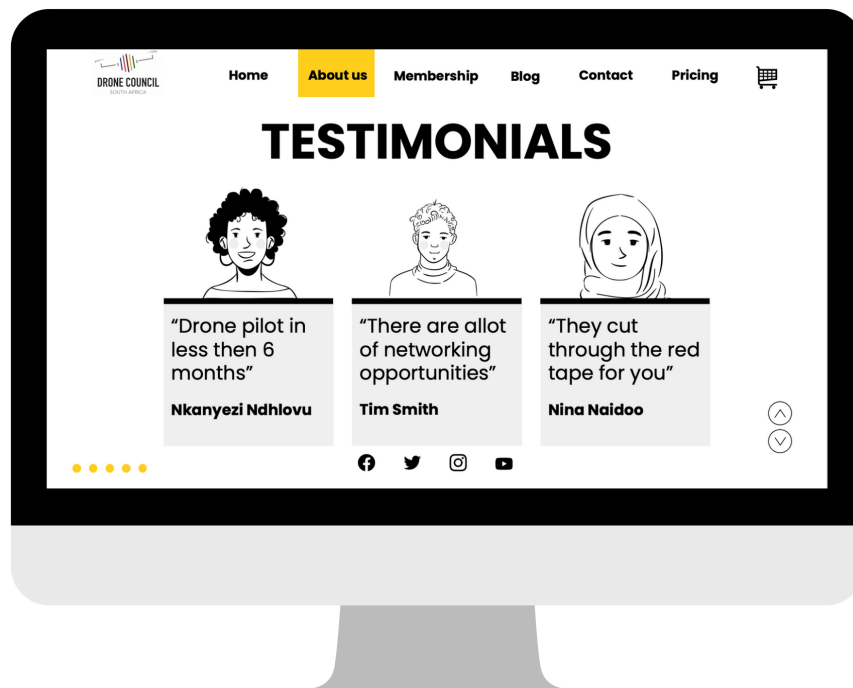


Figure 13: Improved trust/credibility mock-up (member testimonials)

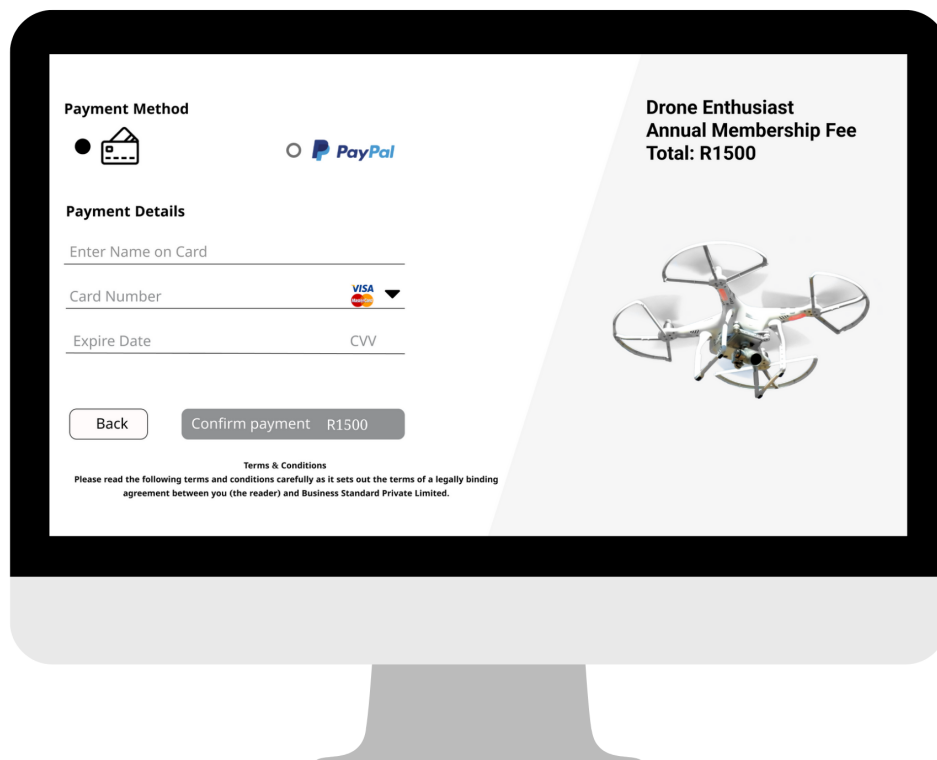


Figure 14: Enhanced usability mock-up (functionality for payments)

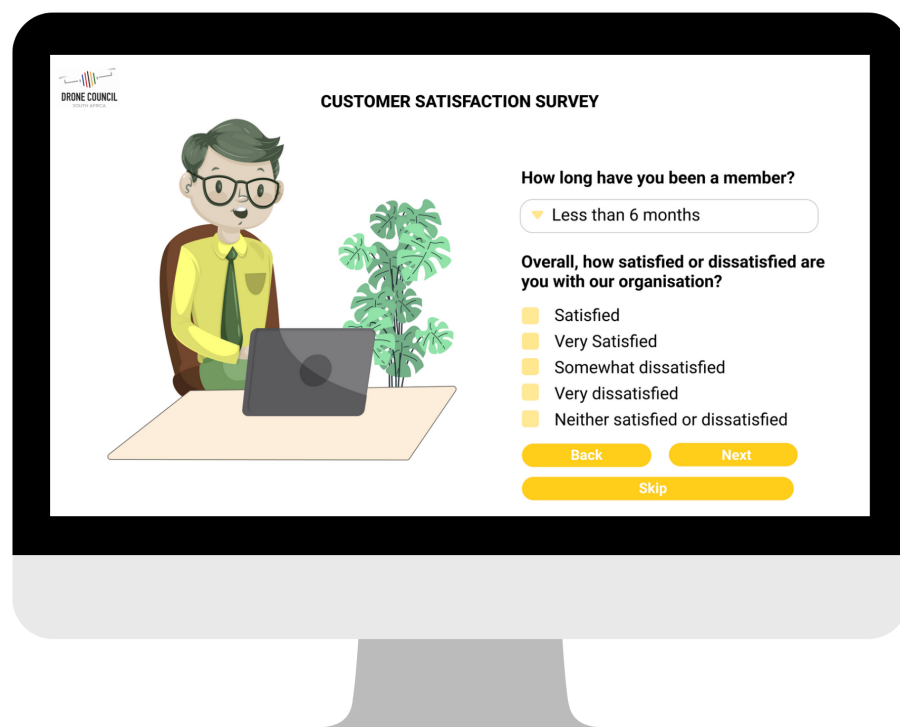


Figure 15: Promoting loyalty mock-up (member survey)