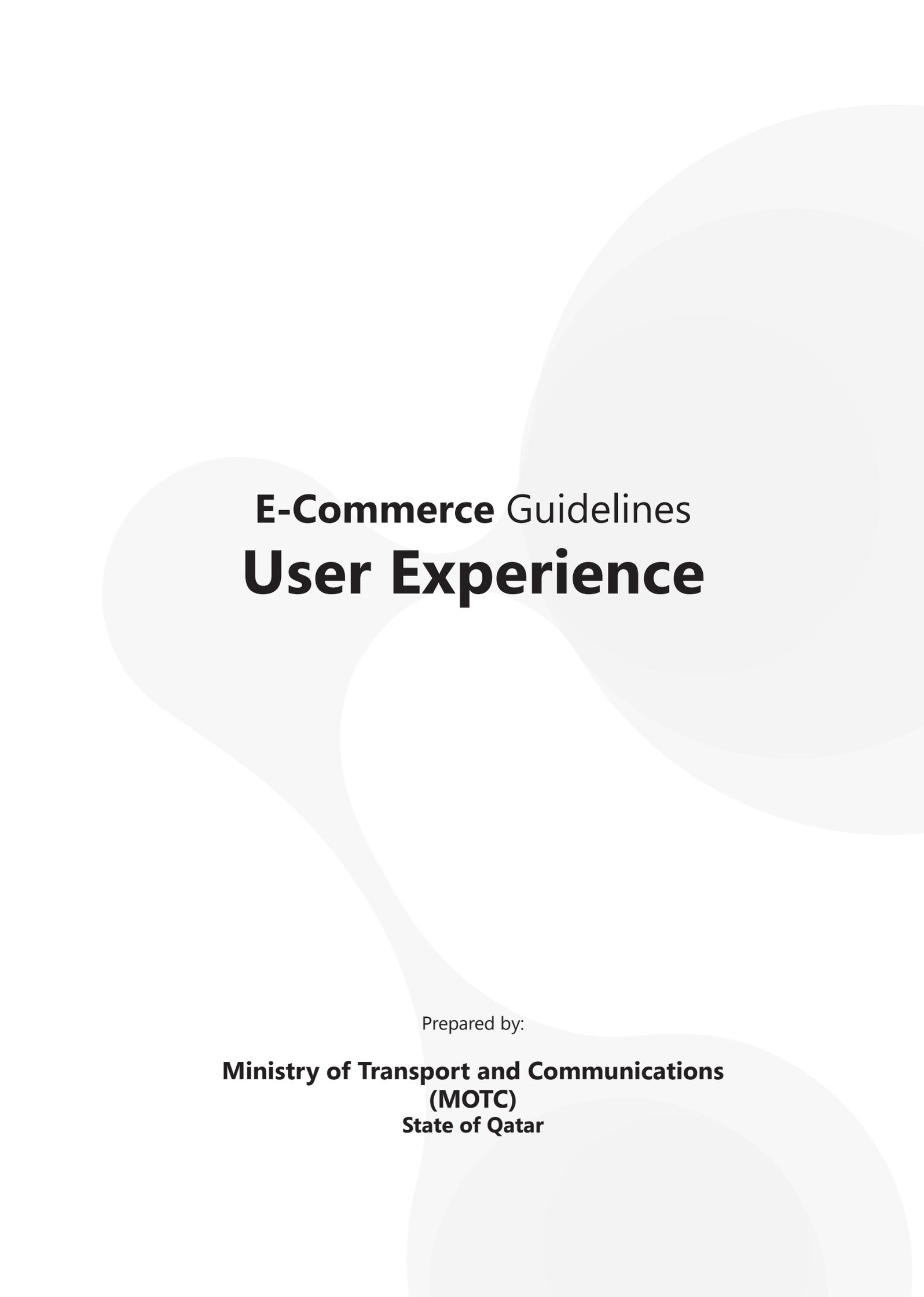




e-Commerce Guidelines

User Experience





E-Commerce Guidelines **User Experience**

Prepared by:

**Ministry of Transport and Communications
(MOTC)
State of Qatar**

2018/2019

Foreword

There has been a long felt need for a comprehensive set of guidelines for development and management of e-commerce Websites, given their ever-increasing use by citizens and residents. The guidelines presented in this document are an effort towards this direction.

These guidelines are an outcome of extensive deliberation by the Ministry of Transport and Communication and advice of experts in Information Technology and e-commerce industry. The guidelines of other countries, as well as International bodies like ISO and W3C, were also consulted.

Special attention has been paid to ensure that the content of the guidelines conform to the overarching philosophy - making sure the e-commerce websites in Qatar are client centric and user friendly.

About the Document

This document contains recommended guidelines for the development and management of e-commerce websites in Qatar, the primary objective of which is to ensure that e-commerce businesses and websites are designed and built to the correct standard. These guidelines can be used as a framework and adhered to when building a website.

Table of Contents

User Experience	1
Foreword	2
About the Document	2
Table of Contents	3
1. Introduction	7
1.1 Background	8
1.2 E-Commerce	8
1.3 Who will Benefit from these Guidelines	9
1.4 User Experience	10
1.4.1 The UX Process	10
Phase 1: Understanding	10
Phase 2: Research	10
Phase 3: Analysis	11
Phase 4: Implementation and Validation	11
Phase 5: Design	12
1.4.2 The User Experience Toolkit	12
1.5 How to Use these Guidelines	14
1.6 Feedback and Suggestions	14
2. Legal	15
2.1 Qatar Electronic Commerce and Transactions by Law	16
2.2 Terms and Conditions	16
2.2.1 Loss, Liability and Damage	16
2.2.2 Intellectual Property	16
2.2.3 Payment	16
2.2.4 Data Protection	16
2.2.5 Terms of Use	16
2.2.6 Delivery	17
2.2.7 Warranty Information	17
2.2.8 Cancellation	17
3. Payment	18
3.1 Payment Types	19
3.1.1 Credit Card Payment	19
3.1.2 Electronic Transfer	19
3.1.3 Cash On Delivery	19
3.1.4 Click and Collect	19

- 3.2 Payment Gateways19
 - 3.2.1 Payment Gateway Process19
 - 3.2.2 Example of Payment Gateways20
- 4. Logistics**22
 - 4.1 Delivery Methods23
 - 4.1.1 Domestic Delivery23
 - 4.1.2 International Delivery24
- 5. Security**25
 - 5.1 Types of Threats26
 - 5.1.1 Price Manipulation26
 - 5.1.2 Snowshoe Spam26
 - 5.1.3 Malicious Code Threats26
 - 5.1.4 Wi-Fi Eavesdropping26
 - 5.1.5 Other Threats26
 - 5.2 Combating Threats27
 - 5.2.1 Secure e-commerce Platform27
 - 5.2.2 Secure Connection for Checkout (SSL)27
 - 5.2.3 Encryption27
 - 5.2.4 Digital Certificates27
 - 5.2.5 Strong User Passwords27
 - 5.2.6 Tracking Numbers for Orders28
 - 5.2.7 System and Database Backups28
- 6. Platforms**29
 - 6.1 Platform Guidelines30
 - 6.2 Leading e-commerce Platforms Available in the Market31
- 7. Marketing**33
 - 7.1 E-commerce Marketing Strategies34
 - 7.1.1 Pay-per-click Advertising (PPC)34
 - 7.1.2 Search Engine Marketing (SEM)34
 - 7.1.3 Search Engine Optimization (SEO)34
 - 7.1.4 Display Advertising34
 - 7.1.5 Affiliate Marketing34
 - 7.1.6 Email Marketing34
 - 7.1.7 Programmatic Advertising35
 - 7.1.8 Social Media35
 - 7.2 Ecommerce Marketing Terms35
 - 7.2.1 Google AdWords35
 - 7.2.2 Search Engine Results Page (SERP)35

7.2.3 Conversion Rate Optimization (CRO)	35
7.2.4 Conversion Funnel	35
8. SEO	36
8.1 Keyword Research	37
8.2 On-Page SEO	37
8.3 Technical SEO	37
8.4 Link Building	37
8.5 SEO Metrics	37
8.5.1 Search Volume	37
8.5.2 Average Ranking Position	37
8.5.3 Organic Bounce Rate	38
8.5.4 Organic Conversion Rate	38
8.5.5 Organic Conversions	38
8.5.6 Link Building	38
9. Reporting and Analytics	39
9.1 Analytics Plugins	40
9.1.1 Ecommerce Tracking Plugin	40
9.1.2 Enhanced Ecommerce Plugin	40
9.2 Key Metrics to Track	40
9.2.1 Customer Lifetime Value (LTV)	40
9.2.2 Returning Visitors	41
9.2.3 Time On Site	41
9.2.4 Pages per Visit	41
9.2.5 Bounce Rate	41
9.2.6 Conversion Rates	41
9.2.7 Page Load Time	41
9.2.8 Customer Acquisition Cost (CAC)	41
10. User Experience in E-Commerce	42
10.1 E-Commerce Journey Map	43
10.1.1 Introduction (Awareness)	43
Specific Metrics to Track During this Phase:	43
10.1.2 Education (Interest)	43
Specific Metrics to Track During this Phase:	43
10.1.3 Evaluation (Analysis)	44
Specific Metrics to Track During this Phase:	44
10.1.4 Decision (Engagement)	44
Specific Metrics to Track During this Phase:	44
10.1.5 Purchase (Conversion)	44

Specific Metrics to Track During this Phase:	44
10.1.6 Retaining (Repeat the Experience)	44
Specific Metrics to Track During this Pphase	45
10.2 E-Commerce UX Principles (Pages, Features and Functionality)	45
10.2.1 Home	45
10.2.2 Navigation, Search and Categories	46
10.2.3 Header	46
10.2.4 Footer	47
10.2.5 Category Landing Page	47
10.2.6 Product Listing Page	48
10.2.7 Product Details Page	48
10.2.8 Shopping Cart	49
10.2.9 Checkout and Forms	50
10.2.10 Help and Support	50
10.2.11 Post Sale and Self Service	51
10.2.12 Responsiveness	52
11. Appendix	53
A. E-Commerce Checklist	54
B. Web Usability Checklist	56
C. Definitions	58
12. Bibliography	63

1. Introduction

1.1 Background

Today, e-commerce has become more of a business imperative than ever before as consumer awareness and expectations evolve. The proliferation of high-speed broadband and the availability of a sophisticated Internet infrastructure and Web-enabled mobile devices present increased economic opportunities for government, businesses, and individuals that could have profound impact on how future business-to-business (B2B) and business-to-consumer (B2C) commerce is conducted.

In 2015, global e-commerce B2C sales totalled USD 1.54 trillion. To get a glimpse into how e-commerce is transforming the marketplace worldwide, one only has to look at some of the world's most successful and popular businesses. Amazon, one of the world's leading online retailers, has no points of sale; Uber, the world's largest taxi company, owns no vehicles; Netflix, the largest pay TV service, owns no STB or transmission infrastructure; and Alibaba, one of the world's most valuable retailers, has no inventory.

This national e-commerce guideline is the first of its kind in Qatar, that helps merchants through all touch points involved in starting and implementing a successful e-commerce business. This guideline is the result of a thorough collaborative effort with local, regional, and international stakeholders across the entire e-commerce value chain—from product creation to consumer receipt of the product—and its successful implementation is dependent on strong collaboration and coordination among the different stakeholders.

Widespread adoption of this guideline would have a positive effect on Qatar's business environment, significantly contributing to economic development, a major pillar of the Qatar National Vision. This is because it will provide businesses better access to consumers, improve business efficiency, expand trade and investment opportunities, and promote innovation, diversification, and competitiveness.

While this guideline outlines a variety of key functions for e-commerce, the core focus has been placed on the user experience and best practice for e-commerce sites.

1.2 E-Commerce

E-commerce (Electronic Commerce) is what we call a business activity where the process of providing customers with goods or services is done by means of electronic devices and the Internet. This sort of communication and finalization of sales adds some new aspects to data management, sales channels, advertising, and presenting goods and services, while also enabling full cycle of commerce operations, including payments, delivery and refunds.

The last decade has witnessed booming e-commerce development. Today, it provides opportunities for not only e-trade, from businesses to buyers, but also online auctions and user-to-user sales platforms. E-commerce systems and activities today include presenting and booking wide range of services, e-banking, commercial operations with e-money and e-wallets, diverse forms of e-marketing and many others, which customers are using more and more on an everyday basis.

Websites and mobile applications for e-commerce are always created within a particular business scheme. This means, they are the part of a certain business plan with the specific goals in mind and the planned ways to achieve them. Therefore, design for this sort of products definitely starts much before the first real line appears on the paper or screen. There are several important factors, which should be considered and agreed upon before actual design starts. Among them are the following:

- **USP of the Business**

It is crucial to define the unique selling point of the business, as this will be used as the fundamental base that sets the business apart from others.
- **Understand the Consumer**

It is important to understand who the buyers are from the beginning of the project. This helps inform the strategy and design that is used to develop the business.
- **Brand Positioning**

The position of the brand will help determine the tone and style used throughout the business. This needs to relate to the value propositions, target audience and strategy of the business.
- **Marketing and Advertising**

While the experience is important for promoting customer engagement, a trigger is necessary to bring clients to the website. This is where marketing and advertising comes into the picture. There are many different ways of driving traffic to a website, from email to Pay Per Click (PPC) to social media advertising.
- **Type of Business Relations**

Type of business relations based on target customers deeply influences the core aspects of UX design. Set from the start whether it is B2B (Business to business) or B2C (Business to customer) to create proper layout and predict possible user behaviour.
- **Typical Environment of Use**

Designers need to know when, where and in which conditions users will typically use the website. These factors have a considerable impact on the decisions about layout, colour scheme, typography, transitions and interactions, all of which need to follow the global objective of making the process easy, quick and enjoyable.

1.3 Who will Benefit from these Guidelines

There are varieties of key players that will benefit from the guideline.

- **E-commerce Merchants**
- **Government Entities**
- **Financial Services**
- **Logistics Companies**
- **Education Institutions**

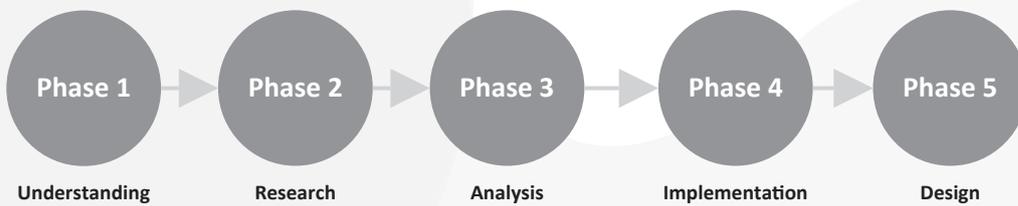
1.4 User Experience

User Experience (UX) is a vital ingredient needed to implement a successful e-commerce website. UX aims to work between the customer and business, with the pure goal of building the best possible experience for customers while meeting business needs. It focuses on having a deep understanding of users, what they need, what they value, their abilities, and their limitations. By implementing standardized UX methodology, e-commerce teams are able to build great experiences for users, which promote ease of use, findability and logical processes. By taking these considerations into account, e-commerce teams can make informed decisions that create positive impact for users, leading to more sales, growth and customer retention.

1.4.1 The UX Process

UX is based on a process and integrated skill set. This process is a guiding principle that helps understand the depth and value of the product, all the way through to delivery.

The basic process can be described as follows:



Phase 1: Understanding

Project introduction and scope	This is one of the most critical phases within the process. It is about understanding and identifying the core needs and objectives of the business. Meetings, workshops and requirement gathering sessions must be conducted with all relevant stakeholders in order to inform the path that follows.
Requirements gathering	
Stakeholder workshop	

Phase 2: Research

Web research	The internet has become a very powerful tool for conducting research. The objective is to tap into this source and uncover any relevant information that may help build the story.
Interviews and observations	It is essential to understand the real needs of consumers and stakeholders. Both customer and stakeholder interviews must be conducted to gain valuable insights that will meet business and consumer needs.
Competitive analysis	A deep dive into the competitor landscape to find out who are the largest competitors, within the region and globally, with the core focus on identifying trends, insights and opportunities.
Expert review/Heuristic evaluation	For a business that currently has a website available, an expert review is conducted based on a scientifically calculated set of heuristics. These heuristics act as rules and best practice which help identify where issues may lie.

Phase 3: Analysis

User journey mapping	The customer journey map is a diagram that identifies all the places (touchpoints) that customers come into contact with the company, both online and offline.
Ideation and strategy	Brainstorming sessions are conducted, taking into account all the research and requirements gathered, in order to define the high-level strategy of the product.
Personas and user story	This is all about understanding what motivates your customers – what are their needs, their hesitations, and concerns. Understanding the customer helps inform all stages of the design to meet their needs.
Sitemap/IA	Information architecture (IA) is the science of organizing and structuring content of the websites, web and mobile applications, and social media software. Information architecture aims at organizing content so that users can easily adjust to the functionality of the product and find everything they need without effort.
Card sort validation	A key principle in User Experience is validation. This validation is aimed at understanding if the proposed IA is structurally correct so that it may be adjusted, if necessary, before the implementation phase. An easy tool to conduct this validation is through a card sort exercise.

Phase 4: Implementation and Validation

Content strategy	Content strategy plans for the creation, delivery, and governance of useful, usable content. It is about identifying key content and building hierarchy to show users the right content at the right time.
Concept sketching	This is a free flowing, rough mock up that starts the design on paper to quickly identify the way forward.
Wireframe	Once sketches are in place, the wireframe process commences. These are low fidelity, skeletal designs that focus on bringing the content, structure and flow together.
Low fidelity interactive prototype	In order to test the wireframe and gain meaningful insights, a quick and interactive prototype is built to purely test the structure and flow of the wireframe
Usability testing	The low fidelity wireframe is tested with real users to validate whether the solution is providing an intuitive experience. Furthermore, this will help identify any missing links and opportunities.

Phase 5: Design

Creative direction	The creative direction plays a key role in adding the right story to an interface. It helps build brand awareness, provides empathy and makes the experience delightful so users keep coming back.
UI design	UI focuses on bringing the interface to life, while providing meaning to each element. The design elements within a user interface reinforce the experience that a user has with a product. Each element should convey both meaning and provide aesthetic value, while working collectively with all other elements to provide a holistic interface.
High fidelity interactive prototype	Once the design has been a completed, elements are made interactive to validate the complete experience. The objective of this is to be validated by stakeholders and customers prior to development.
Usability test	The high fidelity prototype is tested with real users to validate whether the solution is providing the best possible experience.

While the process varies from project to project, the basis remains constant.

1.4.2 The User Experience Toolkit

The UX toolkit can be defined as a set of skills, utilized by UX practitioners, to build an end-to-end user experience. The mechanics of this skillset is based off psychology, human computer interaction, interaction science, cognitive science, taxonomy, research, visual design and project management.

The skillset includes the following:

- Competitive Analysis**
 A competitive analysis is conducted as both a benchmark for the current product as well as research strategy to understand opportunities and threats. It allows the conductor to understand the competition, get actionable insights and boost the brand message.
- Heuristic Evaluation (Expert Review)**
 A heuristic evaluation is a method used for finding usability problems in a user interface design. This involves having a set of evaluators examine the interface and judge its compliance with scientifically proven and recognized usability principles.
- Data Analysis**
 Data analysis is a quantitative research approach that is used to identify what behaviours are, or are not, occurring on the website – information that is critical to any analysis of website optimization opportunities. It is conducted by tagging indicators using an application such as Google Analytics and tracking data over time.
- User Interviews**
 User interview is a qualitative research methodology where a researcher asks users a set of questions based on specific goals. They can be used to examine the user experience, the usability of the product or to flesh out demographic or ethnographic data (for input into user personas) among many other things.

- **Stakeholder Interviews**

Stakeholder interviews are interviews conducted with all relevant business stakeholders in order to gain a full understanding of business needs and requirements. The objective of the interviews is to help product teams understand the product vision, goals, constraints, competitors, customers and success criteria.
- **Usability Testing**

Usability testing is a research method used to see how easy, intuitive and delightful it is to use a product by putting it in the hands of real users. They are asked to complete a set of tasks while a researcher observes them. The objective of this is to see where problems and opportunities may lie.
- **Brainstorming and Workshops**

User experience cannot be a singular process as this leads to biased design. The UX process needs to include collective discussion with multiple stakeholders in order to create a unified and integrated design. Planning and facilitating UX workshops helps bring ideas together within various areas of expertise, leading to a collaborative, unified product.
- **Surveys**

A survey is a simple tool for gathering information. Surveys typically consist of a set of questions used to assess a participant's preferences, attitudes, characteristics and opinions on a given topic. As a research method, surveys allow us to count or quantify concepts—using a sample or subset of the broader audience – the learnings from which can be applied to a broader population.
- **Card Sorting**

Card sorting is a user research method for uncovering how people assimilate and classify information in the website allowing you to develop an effective information architecture and sitemap. It is a simple and straightforward process where participants/customers sort items into a classification, and can be used to label and group information in a website in a way that makes sense to the audience.
- **Personal Development**

A persona is a representation of a user, typically based off user research and incorporating user goals, needs, and interests. The persona is developed using market research, data analytics, interviews and other research methodology, and includes a biography of the user along with a timeline into their life journey. Furthermore, it outlines key criteria such as income brackets, family, lifestyle, digital maturity, background and education.
- **Journey Mapping**

A customer journey map is merely an illustration or diagram of all the places (touchpoints) the customers come into contact with the company, online or offline. This ranges from the first time a customer hears about the product to the engagement that happens after purchase. The journey map highlights what the customer will feel at certain points in time, what constraints there may be and where opportunities may lie in the process.
- **Information Architecture**

Information architecture (IA) is the science of organizing and structuring content of the product. Information architecture aims at organizing content so that users can easily adjust to the functionality of the product and find everything they need with ease.
- **Content Strategy**

Content strategy plans for the creation, delivery, and governance of useful, usable content. It is about identifying key content and building hierarchy in order to show users the right content at the right time.

- **Sketching and Wireframes**
Rough sketches and wireframes are drawn up and digitized through a range of rapid wireframe tools. These are low fidelity, skeletal designs that focus on bringing the content, structure and flow together.
- **Prototyping**
Once the design has been completed, elements are made interactive to validate the complete experience. The objective of this is to be validated by stakeholders and customers prior to development.
- **KPI and Analytics Setup**
A full plan should be developed which defines what tags should be implemented, what metrics will be tracked and how each metric will influence future builds. Data should be analysed over set periods that are outlined in the plan. The analysis will help understand where issues may lie and what opportunities there may be for the business. Results should be tabulated and actioned to improve the experience continuously.

1.5 How to Use these Guidelines

Merchants and officials are expected to read, understand and align to these guidelines. All e-commerce websites set up and owned within Qatar should comply with these guidelines.

The guidelines act as basis, which outlines the process for a generic e-commerce website. However, depending upon the specific requirements of the business, these guidelines may be adjusted so that they are fit the business purpose.

1.6 Feedback and Suggestions

The guideline acts as a generic model, which can be applied, to many contexts. While it has been developed based on the current state of e-commerce, the digital environment changes rapidly. Therefore, it is crucial that updates are made frequently. Any feedback or suggestions would be fundamental to growing a customer centric guideline that can be used by all.

Please send any feedback or suggestions to the following email address: ecommerce@motc.gov.qa

2. Legal

An ecommerce store that is selling goods and/or services must have an accessible, clear set of legalities, terms, and conditions that comply with the laws. Terms and conditions are a legal agreement that must clearly set out the rules of conduct between the business and the customer.

2.1 Qatar Electronic Commerce and Transactions Law

The Electronic Commerce and Transactions Law, also known as e-Commerce Law, outlines rules and regulations concerning electronic business.

The law gives legal weight to business transactions conducted over electronic communications such as emails, and includes the legal validity of electronic contracts and signatures. The By Laws, which have now become effective and enforceable relate, inter alia, to licensing of certification service providers who maintain infrastructure of public keys to issue credence certificates and provide services in relation to digital signatures. The law designates Ministry of Transport and Communications as the entity in charge and requires the concerned authorities, each within its competence, to implement it. The law also includes provisions on email content privacy, the legalization of e-signatures, and the security of consumer information with regard to online shopping. Ultimately, the aim of such e-laws is to boost electronic commerce as an effective tool for businesses to increase their efficiency.

Download the Electronic Commerce and Transactions By Law:
<http://www.motc.gov.qa/en/documents/document/qatars-e-commerce-law>

2.2 Terms and Conditions

2.2.1 Loss, Liability and Damage

In the event of product failure/damage/malfunction, the damage obligations between the seller and customer should be specified along with the level of risk involved.

2.2.2 Intellectual Property

The intellectual property clause must be specified to ensure that brands or trademarks are not misused in any way and clearly, state that nothing contained within the website should be construed as granting any license or the right to use any trademark without the prior written consent of the owner of the website.

2.2.3 Payment

When purchasing products and/or services from the website, payment terms must be specified. Some ecommerce sites will stipulate that until payment has actually cleared, no orders will be dispatched. In the case where payment does not clear, the ecommerce site has a right to cancel the order completely. These extra clauses serve as further protection to a business.

2.2.4 Data Protection

The data protection clause must disclose how the personal information of the customer will be protected, used and stored.

2.2.5 Terms of Use

Simply sets out the terms for accessing a website and applies to every single visitor. The terms of use usually cover items such as privacy and prohibited uses of the website.

2.2.6 Delivery

Delivery Terms should cover both shipping and delivery, and would typically include what the delivery costs are, how shipping charges are calculated, and also (where third party service providers are involved) that the quality of delivery cannot be guaranteed.

2.2.7 Warranty Information

Should set out clear terms on how products can be purchased, whether there are any restrictions e.g. the restriction of sale for age-restricted products and services, and what happens in the event that a product cannot be supplied. Some online stores will also include warranty information as part of their terms and conditions whereas others will have a separate Warranty policy.

2.2.8 Cancellation

This clause should set out the circumstances in which the customer has the right to cancel their order, the process they must follow in cancelling their order and any other requirements e.g. goods must remain unused and returned in its original packaging.

3. Payment

An e-commerce payment system allows users to pay for online transactions using electronic payment. In Qatar, most payments are made on a cash-on delivery basis, and there are limited e-payment methods (debit cards, prepaid cards, digital wallets, etc.). Complex e-payment rules and regulations, complexity in merchant e-payment set up, an acquiring process with high associated costs, and the absence of aggregators in the market inhibit e-commerce development.

3.1 Payment Types

3.1.1 Credit Card Payment

Credit cards are the most common way for customers to pay online. This is generally configured for MasterCard and Visa cards, as well as a few others. Merchants can reach out to an international market with credit cards by integrating a payment gateway into their business.

3.1.2 Electronic Transfer

Customers enrolled in an internet banking facility can do a bank transfer to pay for online purchases. A bank transfer assures customers that their funds are safely used, since each transaction needs to be authenticated and approved first by the customer's internet banking credentials before a purchase happens.

3.1.3 Cash on Delivery

Physical cash on delivery is the most popular payment method used for physical goods in Qatar. Paying with cash does come with several risks, such as no guarantee of an actual sale during a delivery.

3.1.4 Click and Collect

This is becoming a trend with businesses that have physical stores. It is when a customer places an order online and requests that the package be picked up at one of the dedicated drop zones represented by the business.

3.2 Payment Gateways

A payment gateway is an e-commerce service that processes credit card payments for online stores. Payment gateways facilitate these transactions by transferring key information between payment portals such as web-enabled mobile devices/websites and the front end processor/bank.

Payment gateways fulfil a vital role in the ecommerce transaction process, authorizing the payment between merchant and customer. Selecting a good payment gateway directly influences the success of the business as it holds credibility and trust which are among the top reasons for customer conversions

3.2.1 Payment Gateway Process

1. A customer visits the e-commerce site, selects a product and proceeds to enter relevant details in the checkout process. Some sites will also ask the customer to provide payment details during this process. Alternatively, all payment details are provided through the payment gateway

2. If payment details were provided on the website, it securely sends it to the payment gateway
3. The payment gateway sends the details to the merchant's bank
4. The Merchant's bank proceeds to contact the customer's bank and exchange the details
5. The bank provides authorization on the transaction provided that the details provided are correct
6. In some cases, the payment gateway and bank may ask the customer to verify that they are approved to perform the transaction by sending an email or sms to the registered bank contact information
7. The specified amount is deposited in from the customer's account to the merchant's account.
8. The payment gateway returns the information to the website to let the customer know if the status of the purchase

3.2.2 Example of Payment Gateways



- Complete payment solution
- Secure, fast and reliable transactions
- Multiple payment methods
- Website integration
- CMS integration
- Tokenization for recurring payment
- Mobile SDKs for mobile app integration
- POS integration
- E-billing solutions
- Low cost e-commerce & e-billing



- Worldwide usage
- Accept international and local payments
- Checkout pages available in more than 15 languages
- Integrated with a variety of platforms and shopping carts
- Mobile-optimized checkout pages
- Advanced encryption and dedicated security platform
- Easily customizable checkout pages
- Fast, simple and secure



Qatar National Bank

- Secure credit card payment facility
- Single platform to support multiple payment technologies
- Easy Reconciliation and Reporting
- 3-D Secure Visa Authenticated Payment protocol
- MasterCard Secure Payment Applications
- Incorporates a hosted payment page that provides a common interface with the merchant web site
- Secure browser-based access for real time transaction monitoring and reports download
- Flexible, scalable and user-friendly solution



Commercial Bank of Qatar

- Secure credit card payment facility
- Easily integrated to numerous platforms
- Processes major card brands
- Single Point of Certification
- VBV and MasterCard Secure-code
- Reduction in the number of charge-backs
- Reduction in the number of fraudulent transactions
- Quick and easy to incorporate into any e-commerce card processing system
- Increase in potential sales volume through increased consumer confidence in making online purchases
- Added protection against any online fraud
- Compliant to Payments Industry standards and mandates



Doha Bank

- Lowest interchange rate per transaction in Qatar
- Certified for Visa and MasterCard transactions
- Powerful and robust payment gateway system
- Quick and efficient transaction processing
- Multiple security layers
- Flexible platform allows easy integration
- All online approved payments guaranteed by the bank within two working days of the transaction
- 24/7 technical support

4. Logistics

Logistics is the management of how resources are acquired, stored and shipped to their destinations. An objective-orientated system is built to facilitate the planning, execution and control of the movement and placement of these goods and services, which varies by industry.

E-commerce business will by default require logistics services and finding an efficient logistics service provider is the key. Only local companies may deliver domestically and it is important to take this into consideration when selecting your logistics service provider, in order to ensure that they are legally permitted to fulfil your business needs.

The Delivery performance indicators in Qatar are gradually improving albeit at a relatively slow pace, but there are many factors that will improve the performance of these indicators such as increased competition in the parcel delivery sector and more free trade areas, which will also increase imports and raise the attractiveness of trade and exports.

4.1 Delivery Methods:

4.1.1 Domestic Delivery

Legislation in Qatar relating to parcel delivery only permits local companies to deliver domestically from one address to another. Domestic delivery includes but is not limited to the following:

- Door to door with delivery service in Qatar
- Same Day Delivery services
- Delivery tracking
- Overnight Parcel delivery services
- Delivery of trader's goods
- Delivery of hot and cold foods, desserts and ice cream
- Deposit and personal property delivery
- Insurance

Examples of Local Qatar Logistics Companies:



Q-Post



Hammaly



Pick n Drop

4.1.2 International Delivery

Foreign logistics companies are limited to international deliveries in and out of the country. International delivery includes but is not limited to the following:

- Door to door international delivery service
- Delivery tracking
- Delivery of trader's goods
- Deposit and personal property delivery
- Pickup service
- Delivery scheduling
- Insurance



Aramex (Shop and Ship)



DHL



Connected by Qatar Post



Fedex

5. Security

E-commerce security involves protecting the various e-commerce assets from unauthorized access, use, or modification. This is a vital ingredient to a successful e-commerce business as one of the main causes for drop offs is due to trust issues and concerns. Additionally, cyber criminals will often specifically target and exploit weaknesses in e-commerce websites, and any such breach can quickly erode the trust customers place in a business.

5.1 Types of Threats

5.1.1 Price Manipulation

Modern e-commerce systems often face price manipulation problems as these systems are fully automated; right from the first visit to the final payment getaway. Stealing is the most common intention of price manipulation where an intruder slides or installs a lower price into the URL and gets away with all the data.

5.1.2 Snowshoe Spam

Spam is something which has been very common over the last few years. It is basically something which is sent by one person; but unfortunately, a new development is taking place in the cyber world as you read this and is called snowshoe spam. Unlike regular spam, it is not sent from one computer but from many users, making it difficult for the anti-spam software to filter these messages.

5.1.3 Malicious Code Threats

These code threats typically involve viruses, worms, or Trojan horses.

- Viruses are normally external threats and can corrupt the files on the website if they find their way into the internal network. They can be very dangerous as they destroy the computer systems completely, and can damage the normal working of the computer. An important thing to remember is that a virus always needs a host, as they cannot spread by themselves.
- Worms are very different and are more serious than viruses. It places itself directly through the internet and can infect millions of computers in a matter of just few hours.
- A Trojan horse is a programming code, which can perform destructive functions. They normally attack a user's computer when downloading a file.

5.1.4 Wi-Fi Eavesdropping

One of the easiest ways in e-commerce to steal personal data, Wi-Fi eavesdropping is like "virtual listening" of information which is shared over a Wi-Fi network which is not encrypted. It can happen on public as well as on personal computers.

5.1.5 Other Threats

Some other threats to be aware of include data packet sniffing, IP spoofing, and port scanning. Data packet sniffing is also normally called sniffers, and involves an intruder using a sniffer to attack a data packet flow and scan individual data packs. IP spoofing involves changing the source address and moulding it a way as to make it look like it originated from another computer. This makes it very difficult to track the attacker.

5.2 Combating Threats

5.2.1 Secure e-commerce Platform

Development teams and companies might decide to build a complete e-commerce solution, which is not an ideal decision as it entails high costs and security risks. The better approach when building an e-commerce website is to use an existing e-commerce platform.

It is faster, easier and less risky in terms of security to use an existing e-commerce platform. Adopting and customizing e-commerce solutions to the specific needs of a website will save time, money, and human resources, while also providing a good base of security practices already built-in by the e-commerce solution vendors.

5.2.2 Secure Connection for Checkout (SSL)

The internet works on the HTTP protocol for transferring information from the user's browser to the hosting servers. HTTP by its nature is not secure, as it does not implement any type of encryption on the data being transferred.

This puts e-commerce website users at the mercy of hackers on the same network, sniffing for information that is being sent – including passwords, credit card numbers, and addresses.

A solution to this problem is to implement the e-commerce website on a more secure protocol which is HTTPS. HTTPS implements an SSL (Secure Socket Layer) certificate that enables all communication between the user's web browser and the e-commerce website server to be completely encrypted. This encryption in communication ensures that the user's information is not exposed to anyone monitoring the network traffic.

5.2.3 Encryption

It is the process of converting a normal text into an encoded text, which cannot be read by anyone except by the one who sends or receives the message.

5.2.4 Digital Certificates

A digital certificate is issued by a reliable third party company. A digital certificate contains the following things: the name of the company (Only in EV SSL Certificate), the digital certificate serial number, expiry date and date of issue. An EV SSL Certificate is necessary as it provides a high level of authentication to the website, while also protecting it from unwanted attacks such as Man-In Middle Attack. There are other different types of SSL Certificates available (such as Wildcard SSL, SAN, SGC, Exchange Server certificate, etc.) which can be selected according to the need of your website.

5.2.5 Strong User Passwords

Hackers have devised a logical approach to solving simple passwords through techniques known as social engineering. To tackle this problem, additional validation rules must be implemented on sign up forms with Users being required to choose more difficult passwords by using a combination of upper and lower case letters, numbers, and special characters.

5.2.6 Tracking Numbers for Orders

Tracking numbers should be implemented for all orders that need to be shipped to customers. The tracking of packages helps identify customers by confirming their billing and shipping addresses, and also helps prevent 'charge-back fraud'. This is where a user might say they did not receive an order, and then demand a refund, when actually they did get their item delivered.

5.2.7 System and Database Backups

A backup strategy must be devised which allows the business to keep copies of data for reference in case any problems occurs on the main server of the e-commerce application.

Online backups are needed for data redundancy (the replication of data as a backup), allowing the web content to be switched to those backups automatically in case the primary server that is serving the e-commerce solution fails or is compromised.

Local backups allow the business to cater for disaster situations in case they happen with the hosting provider or data centers.

6. Platforms

An e-commerce platform is a software application that provides the form and structure to allow your businesses to manage the website, sales and operations. These platforms offer the powerful features needed to run a business online and are continuously updated to handle upgrades in security and technology. Additionally, they are integrated with leading business tools — enabling businesses to centralize their operations and run their business their way.

These entities provide “end to end” e-Commerce solutions as a service. This at the very basic level means they provide highly customizable templates for e-Commerce websites for a monthly fee. In reality however these entities provide a wide range of front and back office features with their services, such as content management, customer relationship management, order processing, order fulfilment etc., making them a very attractive proposition to new e-Commerce businesses.

6.1 Platform Guidelines

- The following guidelines are the general rule set which should be consulted for choosing or building the ecommerce platform:
- Allows to manage product data i.e. the feature to add, update and remove product.
- List and display product
- Allows to keep track of inventory
- Allows to place product in cart, if there are multiple products offering
- Allows to place order
- Allows to collect payment securely
- Should be able secure the portal from credit card frauds using PCI DSS compliant payment processing solutions.
- Allows to integrate with local Qatar banks
- Provide customer clear information about what they are going to purchase and what will be the cost. Only if customer accepts then should be able to proceed for payment collection
- Provide customer with a receipt of purchase
- Should keep the data of customer secure
- Should not share the data of customer without prior consent of customer
- Provide customers with a mechanism to contact merchant, notably via webform, live chat, contact numbers etc.
- Provide customers with Privacy policy (including data & cookie) and terms & conditions
- Allows customer to view the prices in Qatari Riyal
- Allows website to be localized in multiple languages and be able to adapt both LTR and RTL type languages
- Allows content to be populated in Arabic and English at least
- Allows customer to access the platform on mobile devices as well as desktop

Other than above, one should carefully check the requirements of the business with the features of platform.

6.2 Leading e-commerce Platforms Available in the Market.



Woocommerce



Magento



Shopify



Wix



Qpay International



Prestashop



Big Commerce

In addition to above, there are some third-party entities that allows you to present your products and services on their website where they will manage the presentation and all aspects of sales including payment processing and delivery. You can expect to pay a recurring fee to showcase your products and a commission on each product/ service sold. Some third party e-commerce platform can require an initial subscription fee especially for premium listing/ presentation.



Qatar e SOUQ



DOHA SOOQ



SOUQ

*Please note that MOTC does not affiliate / recommend / suggest any of platforms in any manner. List is provided just for information purpose without any order of priority.

7. Marketing

E-commerce marketing is the process of driving sales by raising awareness about an online store's brand and product offerings. Digital marketing for e-commerce applies traditional marketing principles to a multichannel, data-driven environment.

E-commerce marketing can be divided into two general actions: driving website traffic and optimizing the user experience for conversion. Both are critical components to growing an online business — failure in one will undermine any success in the other. Seasoned marketers can thrive in a digital landscape, starting with a solid foundation of common terms.

7.1 Ecommerce Marketing Strategies

7.1.1 Pay-per-click Advertising (PPC)

Effective PPC campaigns drive users with intent to purchase, making it more efficient than many traditional advertising platforms. Businesses bid on impressions for paid listings at the top of search engine results, paying on a per-click basis. Impressions are determined by user search query, with strategy revolving around which keyword bids yield the highest ROI.

7.1.2 Search Engine Marketing (SEM)

SEM is often used to describe efforts on Google's AdWords platform and paid platforms on other search engines, such as Bing. This multifaceted term is also used by many marketers to describe all paid and organic efforts.

7.1.3 Search Engine Optimization (SEO)

SEO traffic comes from unpaid "organic" results on search engines such as Google and Yahoo. Successful SEO requires adherence to best practices on a product page level in tandem with content creation, inbound links, social media engagement, and many other factors that search engine algorithms take into consideration.

7.1.4 Display Advertising

An overarching term for banners, sidebars and other predominantly visual advertisements that appear on other websites, display ads are facilitated by ad networks such as Google Display Network.

7.1.5 Affiliate Marketing

Referrals from other websites with industry or product-focused content such as reviews, comparisons, and testimonials are termed as affiliate marketing. Successful affiliates have a loyal following or receive traffic from some of the above channels. They typically receive a set commission of referred sales, often determined on a case-by-case basis.

7.1.6 Email Marketing

Newsletters, abandoned cart notifications, wish list reminders and remarketing all use email to target past and potential customers.

7.1.7 Programmatic Advertising

Programmatic ad buying typically refers to the use of software to purchase digital advertising, As opposed to the traditional process, that involves RFPs, human negotiations and manual Insertion orders. It is using machines to buy ads, before programmatic ad buying, Digital ads were bought and sold by human ad buyers and salespeople, who can be expensive and unreliable. Programmatic advertising technology promises to make the ad buying system more efficient, and therefore cheaper, by removing humans from the process wherever possible.

7.1.8 Social Media

Social media marketing is the process of leveraging social media networks to interact with prospects and ultimately increase traffic and sales to a website. Online businesses rely on social media such as Facebook, Instagram and Twitter to build a connection with users who are increasingly relying on social networks and mobile devices to consume web content.

7.2 Ecommerce Marketing Terms

7.2.1 Google AdWords

Google's advertising platform pioneered the PPC model and capitalizes on the company's majority share of the search market.

7.2.2 Search Engine Results Page (SERP)

The cumulative results from users executing a search engine query, comprising organic and paid listings. Having results on the first page of SERPs is critical to acquiring new customers.

7.2.3 Conversion Rate Optimization (CRO)

The process of improving every aspect of a website so that more visitors purchase. Faster load times, fewer clicks to purchase and more enticing product descriptions/images make it easier for users to evaluate products and follow through to purchase. The most common metric for evaluating CRO efforts is conversion rate.

7.2.4 Conversion Funnel

The steps taken by a prospect to become a customer, beginning with awareness and ending with a purchase. Higher-priced items generally have a longer sales cycle, while low-cost items can convert in a much shorter period of time.

8. SEO

Search engine optimization (SEO) is the practice of increasing the quantity and quality of traffic to the website through organic search engine results. Search engines can be a great free channel for growth and is directly related to the user experience on the site as it helps users find what they need more efficiently. E-commerce sites can work on improving SEO in four key areas, being, keyword research; on page SEO, Technical SEO and link building. Furthermore

8.1 Keyword Research

Keyword research refers to the usage of words throughout all areas of the website, from the landing page to category pages to product pages. The market is extremely competitive, words should be chosen strategically to gain a high ranking and ideally attract the correct users.

8.2 On-Page SEO

On-page SEO refers to optimizing individual web pages on the e-commerce site in order to improve ranking. This is based on the content and HTML source code of a page that can be optimized, as opposed to off-page SEO which refers to links and other external signals. A large part of this is based on the content strategy implemented on each page, such as the hierarchy of headings, images, descriptions and navigation.

8.3 Technical SEO

This is the technical aspects of the website that influence the quality of the experience. It is about laying a strong foundation so that search engines are able to easily access and crawl the site. Technical aspects need to be taken into consideration such as page load speed, responsiveness, a logical site architecture and XML sitemap and avoidance of duplicate content and errors.

8.4 Link Building

Link building is referred to as offsite SEO. It is the process of acquiring links from other websites to lead to the e-commerce site. Search engines use links to crawl the web; they will crawl the links between the individual pages on the e-commerce website, and they will crawl the links between entire websites. Websites that have a higher amount of links leading to their website from credible, relevant sources are considered more trustworthy and will rank higher.

8.5 SEO Metrics

SEO metrics should be tracked on a continuous basis in order to find issues and resolve them.

8.5.1 Search Volume

The business can grow with SEO if there are a lot of people searching for the product in Google or Bing. Keyword Planner is useful to learn if the keywords you want to be ranked for can generate enough traffic for growth.

8.5.2 Average Ranking Position

In the SEO Report in Google Analytics, you can see the average position of the keywords that are bringing in traffic. Position 1 means the website is the first result in Google for that keyword, the one that generates the most traffic.

8.5.3 Organic Bounce Rate

If people have clicked on a search result in Google, they will land on the site. If their expectations are not met, people will leave, and you will get high bounce rates. Google uses bounce rates as a measure for ranking too, so high bounce rates are not only bad for sales, but for SEO. For SEO, it may reflect the issues with the selection of keywords. If your keywords selection is not good, then after optimizing your website for those keywords will bring irrelevant traffic to the website which will result in increase bounce rate.

8.5.4 Organic Conversion Rate

The conversion rate is the percentage of users who take a desired action. The archetypical example of conversion rate is the percentage of website visitors who buy something on the site. If the visitor clicked through to your website after searching for a keyword you're currently ranking for and took a desired action this will be called organic conversion.

8.5.5 Organic Conversions

A conversion is an action that occurs on the website, which is a predetermined goal set by the business. An organic conversion is basically the conversion made by the visitors that landed on the website through SEO. This varies greatly depending on the type of business and what the goal of the website is. An Ecommerce store wants to convert website visitors into purchases directly on their site. Each conversion can easily be tracked and compared with the campaign in order to determine the cost of each conversion. From here, it can be optimized and changed in order to achieve a lower conversion cost. SEO campaigns can deliver high rankings and an insane amount of website traffic, but if the conversion numbers are low then it will not be a successful marketing campaign. A lot of this has to do with the website content, layout and call-to-action location.

8.5.6 Link Building

One link from a high-quality website has much more value than thousands of low-quality spam links. Proper search engine optimization is all about quality and should never revolve around quantity.

9. Reporting and Analytics

Data analytics are used to understand the way all digital elements are performing. Setting up goals and KPI's for the website is essential to defining what are the main areas that need to be reported on. These metrics are tracked in order to analyse the effectiveness of the business.

One of the reasons Google Analytics Enhanced e-commerce is so effective is the magnitude of data it collects, including some areas the standard Google Analytics ignores. This data can reveal many of the elusive factors you need to make informed business decisions:

- How to design the site to appeal to your visitors
- The areas of your site that are most/least effective, and what that means
- Raw components for a SWOT analysis
- Behavioral patterns that signify problematic areas

The top priority should be to achieve Product/Market Fit, which is an indication that the business is providing real value to customers. A store that has achieved Product/Market Fit is one that offers a successful solution to a customer's problem or unmet need. If the product truly fits the market, people are willing to exchange money for it.

9.1 Analytics Plugins

9.1.1 Ecommerce Tracking Plugin

Ecommerce tracking allows you to measure the number of transactions and revenue that your website generates. On a typical ecommerce site, once a user clicks the "purchase" button in the browser, the user's purchase information is sent to the web server, which carries out the transaction. If successful, the server redirects the user to a "Thank You" or receipt page with transaction details and a receipt of the purchase. From here, you can send the ecommerce data from the "Thank You" page to Google Analytics by using analytics.js library. The massive amount of extra data available in Google Enhanced Ecommerce Tracking is extremely useful for building an online retail business... but at times it can be a bit overwhelming. Perhaps this is what is kept your e-commerce brand from using it in the past, or perhaps you do use it, but are confused about its true potential.

9.1.2 Enhanced Ecommerce Plugin

The enhanced ecommerce plug-in for analytics.js enables the measurement of user interactions with products on ecommerce websites across the user's shopping experience, including: product impressions, product clicks, viewing product details, adding a product to a shopping cart, initiating the checkout process, transactions, and refunds.

9.2 Key Metrics to Track

9.2.1 Customer Lifetime Value (LTV)

Lifetime value measures how a business will profit from the average customer over the timeframe that they will remain a customer. This is calculated based on the average customer purchase, profit per purchase and the number of purchases made in the customer's lifetime. Adopting new and improved CRM strategies may help increase the lifetime of the customer, thus improving the LTV.

9.2.2 Returning Visitors

This measures the percentage of users who return to the site after their first visit. This is an indication that they were interested, and cookies may be tracked to personalise their experience the next time they enter the site. A good ratio of returning visitors to new visitors is above 20%.

9.2.3 Time On Site

The time on site metric may be both good and bad. Generally, a longer period spent on the website means that customers are interested in the content. However, if customers are spending long periods on an e-commerce site which is not leading to conversions then there might be a problem with the journey and flow.

9.2.4 Pages Per Visit

The average number of pages that users navigate on the site in a single visit. A high number of pages per visit (around 4) indicates that people are interested in what is being sold.

9.2.5 Bounce Rate

The percentage of users who visit a single page on your website and then leave before taking any action. A high bounce rate (usually above 57%) means that your site is not giving a good first impression. A user may bounce because of poor design, unmet expectations, or slow page loading time.

9.2.6 Conversion Rates

The percentage of people that visited the website and either signed up or made a purchase is the conversion rate. This is important because the lower the conversion rate is, the more expensive and time consuming it will get to make a sale.

9.2.7 Page Load Time

Page load time can have an impact on revenue of as much as 16%. Increasing speed has become a fundamental product requirement. People need websites to load faster and information to be readily presented. Every second counts when it comes to the time it takes for a page to load and if visitors cannot find what they are looking for, it will have a direct negative effect on business results.

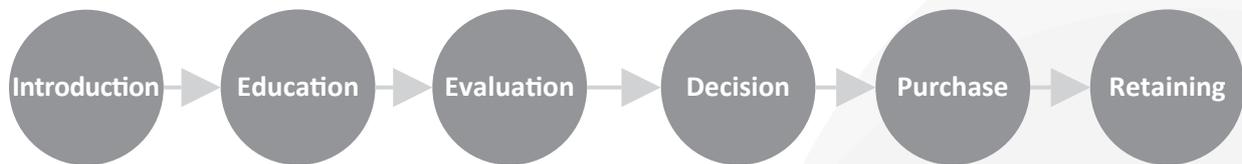
9.2.8 Customer Acquisition Cost (CAC)

CAC measures the amount of money being spent to acquire each customer. Since customer acquisition is the main expenditure in e-commerce, if the CAC is higher than the lifetime value per customer, the business will be operating at a loss. CAC requires a simple calculation of the amount spent in marketing versus the number of sales generated from that amount.

10. User Experience in E-Commerce

10.1 E-Commerce Journey Map

The E-Commerce journey map sets out the desired path a user will take when placing an order online.



10.1.1 Introduction (Awareness)

User gets the initial information about the product, its brand name and nature. In other words, user learns that the product or service exists in the market.

Specific Metrics to Track During this Phase:

Paid Traffic:

- Click-Through Rates
- Cost Per Click
- Impressions and Reach
- Negative Social Signals (Unlike, Unfollow, etc.)
- Retargeting List Growth (Facebook and Google)

Organic and Search Traffic:

- Unique Visitors
- Search Rankings
- Backlinks
- Referral Traffic
- Direct Traffic
- Mentions
- Positive Social Signals (Likes, Shares, etc.)

10.1.2 Education (Interest)

User is provided with more detailed information about the features and benefits of the product or service that can potentially interest them and solve their problems.

Specific Metrics to Track During this Phase:

On-Site Behavior:

- Average Page Views
- Bounce Rate
- Time On Site
- Landing Pages
- Exit Pages
- Heat Maps

Email:

- Opt-ins
- Unsubscribes
- Open Rates
- Click Rates

10.1.3 Evaluation (Analysis)

User gets the chance to compare the offer with its competitors and obtain the information about USPs (Unique Selling Points) of the offered product or service.

Specific Metrics to Track During this Phase:

Category and Product Pages:

- Time On Site
- Average Page views
- Video Plays
- Heat Maps (FAQ, About Us, Shipping, Contact Us)
- Add To Cart
- Trust Signals
- Exit Pages
- Landing Pages

10.1.4 Decision (Engagement)

User gets final vital arguments engaging him/her to make a decision; it can be short summing-up of the core benefits of the offer, data about additional bonuses or special offers, engaging call to actions or explanation of purchase process.

Specific Metrics to Track During this Phase:

Shopping Cart:

- Cart Abandonment Rate and Recovery
- Average Order Size
- Conversion Rate

10.1.5 Purchase (Conversion)

User makes a decision and takes the steps needed to make a purchase. The sale is done.

Specific Metrics to Track During this Phase:

Checkout Process:

- Drop off rate
- Exit pages
- Time taken to complete
- Conversion rate

10.1.6 Retaining (Repeat the Experience)

User gets the opportunity to leave feedback, obtains additional contacts supporting the offer, subscribes to updates, gets the chance to repeat the purchase easily if desired.

Specific Metrics to Track During this Phase:**Post Purchase:**

- Product Reviews
- Referrals
- Repeat Purchases
- Social Signals
- Return Rate
- Chargebacks
- Lifetime Value
-

10.2 E-COMMERCE UX PRINCIPLES (Pages, Features and Functionality)

10.2.1 Home

The homepage of an e-commerce website is a lot like prime-time television slot. Every product is vying to be there, but only the very best gets the slot. It can be thought of as the storefront for your website. This is where you allure, mesmerize, convince, coax, or seduce the visitor down the funnel.

Best Practice:

- Make the logo visible for trust and recognition
- The search bar should be given priority and focus for task-driven users
- Setup and present clear and optimal categories. The taxonomy of categories should help users find desired products with ease. A well-organized website can have a huge impact on how the audience searches
- Dock the search bar, contact details and categories on the page. This should be available at any time as the user scrolls
- Contact information should be easily available and visible at all times. Announce Location and Phone Number without having to click into a new page
- Personalize the customer experience by caching browsing history and featuring it on the page
- Do not use rotating carousels. They are not good for SEO and annoy users. If carousels are implemented, use a tabbed component which allows the user to change the content when needed
- Provide an easily accessible 'Product List' to help users find a desired item
- Shopping cart should be made accessible from the home screen and be available at all times
- Sales and offers should be tagged and made highly visible to guide discount seekers
- If shipping is free, give this priority. High shipping charges are a leading cause of cart abandonment, and no shipping charge is what beautiful shopping dreams are made of
- Help users make purchasing decisions by showing 'Best Sellers'
- Help users make purchasing decisions by showing most popular items
- Provide Rich media enhancements to give a dynamic and memorable experience
- Social media updates, links and feeds should be present

- Give the user a sense of comfort by presenting security badges
- It is essential that websites should have the flexibility of having multiple languages (mainly Arabic and English)

10.2.2 Navigation, Search and Categories

You cannot sell a product that your customers cannot find. Navigation is a critical element of building a profitable e-commerce website, so you need to ensure that your site accommodates all types of searches and returns relevant results for categories, products, and product characteristics.

Best Practice:

- The navigation is obvious enough throughout the related sections
- The website uses a clear user-logical hierarchy of categories to classify products and to find them. The categories should be easy to identify and differentiate for the customer
- Place focus on search bar to streamline the process for a task-driven user
- The website includes a site map
- Autocomplete for search input should be considered
- Predictive search should be considered
- The search has advanced features that allow for a limit to a great variety of criteria (features, categories, etc.)
- Support spelling errors within search
- Search history should be provided to allow users to quickly return to their previous search
- Consider a no results page which should provide assistance when there are no relevant search results
- Display number of search results
- Provide appropriate feedback for incorrect searches
- Use product thumbnails on search listings

10.2.3 Header

Website headers are one of the first components that a user sees and are highly valuable in providing success to an e-commerce website. They act as a subtle reminder of the brand credibility to convey trust, while also performing a crucial navigational function, which helps guide users on through the journey to purchase.

Best Practice:

- Use a consistent header across all pages of the website
- Keep the header simple and meaningful. It should provide a subtle link to important areas without visually deterring users from other content on the page
- Include the company logo in the top left of the header
- Avoid "Hamburger" menus for e-commerce websites as this adds an extra step to
- Convey product breadth by using dropdowns that include all subcategories
- Utilise a mega menu in the drop down area which shows a large number of options in one panel, grouping them into categories and subcategories
- Add visual cues within dropdowns to easily guide users towards interested categories
- Include the shopping cart within the header

- Include the search bar within the header
- Provide an option for help, support and contact details within the header
- Use universally understood icons to utilise header space effectively, thus minimising text
- Develop the header to remain fixed on the page so that it is visible after the user scrolls

10.2.4 Footer

The footer is placed in the area at the bottom area of the website and places an important role in tying the main functions of the site together. Many tests have shown that although the footer is not viewed by all visitors, it acts as a safety net that many customers proceed to when having difficulty finding something. If designed effectively it will keep customers on the site and reduce abandonment. The footer is the ideal place to stick navigation items for the less-visited pages, especially company information, terms of service, and privacy policies.

Best Practice:

- Use a consistent footer across all pages on the website
- Provide a well-structured view of product categories and subcategories
- Place a call to action button and form in the footer enticing users to sign up for the newsletter
- Include a logo and brief description about the business
- Provide links to secondary pages relating to the company such as "About us", "History"
- Place legal links, Terms and Conditions and privacy policies in the footer
- Helps users identify payment methods by placing logos on the footer
- Include security certificates and credible badges to improve trust
- Provide links to social media pages
- Add contact information
- Use negative space effectively and group footer content so that it is easily scalable

10.2.5 Category Landing Page

The category landing pages of e-commerce sites act as condensed, specialized versions of the home page with a focus on the suggested category. This is only needed for e-commerce stores, which contain a large variety of product categories with subcategories. The category landing page should highlight all the main elements of the category to guide the user towards identifying his/her needs before moving directly towards a product listing page. The category landing page is more informative and visual, showing featured items, popular deals, new products, sub categories and more.

Best Practice:

- Labelling of the category page is of utmost importance. The category landing page should have a name that is intuitive enough for users to identify the sub-categories that will be within it
- The search bar should be given priority and allow users to search directly within the category
- Personalize the customer experience by caching browsing history and featuring it on the page
- Provide an easily accessible 'Product List' within the category to help users find a desired item
- Shopping cart should be made accessible and be available at all times
- Sales and offers should be tagged and made highly visible to guide discount seekers
- Help users make purchasing decisions by showing 'Best Sellers' within the category

- Help users make purchasing decisions by showing most popular items within the category
- Place focus on brands and subcategories

10.2.6 Product Listing Page

The product listing pages on sites help users efficiently scan through a variety of products with relevant ease. They can be compared to the shelves in a physical store and should be structured so that users can filter their results based on their needs.

Best Practice:

- Consistency between listed products for easy scalability
- Only include important information for easy scalability
- Listing should include Category-Specific Attributes
- A filtering function should be included on the left panel of the page to allow users to funnel the listings based on category-specific attributes. The filter should be designed for users to select and switch between multiple attributes
- Listed imagery should have a consistent style
- Listed imagery should ideally be placed against a white background
- Listing information should be organized using text size, weight and colours to highlight the most important attributes
- Utilizing a quick view option, allowing the user to see more detail without loading a new page
- Show how many items are still available for purchase to drive commitment
- Include a dynamic filter which can be updated with ease
- A sorting function should be applied to listed items
- Highlight promotions and offers with applicable savings
- Add a good introduction to category pages
- Product review average should be made visible per listed product
- There are tools to ease the comparison between different products

10.2.7 Product Details Page

Provide as much information about your products as you can on your site. This can include sizing guides, dimensions, reviews, ratings, social information, inventory levels; anything and everything you have to help describe your product should be easily accessible to your customer. Product detail pages should be keyword rich, with each product given its own detail page, as this enables your site to rank for each product page. Furthermore, this also prompts other sites to link directly to your product pages, which is an important "off-page" factor in search rankings.

Best Practice:

- Use clear and short product titles
- Product images should be high resolution, clear and consistent
- Price and availability should be highlighted
- Product descriptions should be short and show the most relevant information
- Product reviews may be implemented as both social proof and assurance of the product. This should be highlighted at the top of the page, with the ability to see further details if needed
- Show similar/recommended products to assist the users with the purchase

- Call to action should be strong and use a consistent visual language
- Secondary information should be placed below the fold
- Provide the functionality for enlargements and 3d effects in imagery
- Provide social media sharing
- Provide an option to give a product rating as social proof
- Provide shipping and delivery information upfront
- Delivery time should be made available
- The functionality to add an item to a wish list has been implemented, thus allowing users to fulfil a purchase at a later stage
- Focus on the add to cart or purchase button
- Utilize smart recommendations for additional purchases
- Provide payment methods upfront
- Product image should be zoomable and there should be multiple views of the product
- Be clear about your prices. If you add surprise costs like shipping or taxes later on during the checkout process, this will backfire. Be clear about these additional costs (if any) right from the start
- Products with a lot of detail may benefit from allowing the user to have a closer look using zoom. This detailed view may help the user make their decision.
- Give users a way to move between images in the gallery and know their place in the gallery
- Display item inventory status (in/out of stock or quantity on hand) in the catalogue
- Allow users to manually advance in the image gallery
- Don't autopay the gallery

10.2.8 Shopping Cart

A shopping cart is a software solution, which has a core responsibility of holding items while the user is shopping and calculates the total amount to be paid when checking out. When users check-out, they are sent to a checkout page with all the list of items that were accumulated in the shopping cart. It is essential to build a great shopping cart experience to reduce cart abandonment rates and improve conversions.

Best Practice:

- Allow a quick view of the shopping cart from all pages
- Allow for a full page view of the shopping cart
- Use cookies to enable a persistent shopping cart
- If you have the customer's email, notify them to get back to an abandoned cart
- Promote free shipping when the customer spends over a certain amount
- Let the shoppers easily remove items from cart
- Allow the user to edit cart items
- Notify when an item has been added to cart
- Place the shopping cart icon at the top right of the page
- Provide an option to calculate shipping costs within the shopping cart
- Ability to add promo codes/coupons within the shopping cart to calculate final price
- Provide the name of the product and a clear product image
- Show availability of the products in the cart

- Provide an option to add more products to cart
- Provide a call to action to “Checkout” from the shopping cart

10.2.9 Checkout and Forms

The checkout process should be simple for users. All efforts should be made to remove unnecessary barriers to order completion. For instance, forcing customers to log in or register before they can place an order is not recommended as it contributes to cart abandonment. Additionally, difficult contact collection screens that force a user to change behavior, such as requiring a different format on phone numbers, addresses, etc., also can contribute to low conversion rates.

Best Practice:

- Guest checkout should be provided as an option to reduce drop-offs
- Simplify process for registered user checkouts by using the details captured previously by the user
- Make account registration an optional step
- Enable a guest (First-time shopper) to create an account (customer profile) and allow a returning customer to edit profile
- Recognize return visitors through use of cookies
- Show all the benefits of purchasing through the site, such as free delivery or 30 day return policy
- Enable coupons for purchases
- Show a user where they are in the process using a step indicator
- Show all fees (from the start of the e-commerce journey)
- For high priced items, offer financing or payment instalments
- Ask people to continue shopping after a purchase
- Activate customer shipping address validation and correction at checkout
- Automatically populate shipping address from “same as billing address”
- Mark fields as optional or mandatory. Avoid optional fields if they are not needed
- Make the form as short and simple as possible
- Forms should follow a functional process, leading the user to the next step using a logical approach
- Provide order summary on the cart and checkout pages, including number of items, item images, shipping, subtotals, discounts, tax and order total
- Prefill data where possible
- Use simple language. Avoid complicated terminology
- Contextual help should be provided throughout the process

10.2.10 Help and Support

Customers must be presented with multiple ways to get in contact with the business if they have a question or problem. Different communication options should be provided to allow the customer to choose the method they prefer, such as FAQs, customer service, live chat, email and telephone number. These options should be easily found on any page of the site.

Best Practice:

- Provide Call-to-actions (CTAs) to get help throughout the site
- Ensure easy accessibility. Identify Customer Support clearly in your site's primary navigation
- Provide contact information in a place that's easy to find
- Provide answers to common questions through FAQs
- Be responsive. Provide an automated acknowledgement with a commitment to follow up within a certain period of time
- Use clear language. Customers are quickly turned off by overly technical customer support content they don't understand
- Provide an option for customers to be called back by filling in a form
- Manage implementation of third-party applications to support enhanced front-end website capabilities such as Live Chat and virtual assistant tools

10.2.11 Post Sale and Self Service

The post-sale experience on an e-commerce website is just as important as the pre-sale experience as it directly influences the customer life value. Building a great post-sale experience ensures that new clients remain customers of the business, leading to future sales. In order to achieve this, the customer must be provided with a feeling of achievement and gratitude, and be provided with added functionality, which adds value to the online purchase.

Best Practice:

- Explain "What happens next" by telling users what process will follow once the order has been placed
- Assistance should be made easily accessible
- Notifications should be provided during all delivery stages
- Give users the ability to track progress once the order has been placed
- Provide a full purchase summary and receipt
- Cancellation and return policies should be conveyed upfront
- Refunds conditions and process should be conveyed upfront
- Rate the service. Once the product has been delivered, allow the customer to provide a rating
- Rate the product purchased. Once the product has been delivered, allow the customer to provide a rating
- Ability to manage orders - Cancel, update or return
- Save and update personal and account information
- Manage emails alerts and messaging
- View and manage wish lists
- See a consolidated list of previous orders with important information
- Obtain printable invoices from all previous orders
- Apply to promotional offers and subscriptions
- Enable social login (Google, Facebook, Twitter)

10.2.12 Responsiveness

Mobile usage in Qatar has increased significantly, overpassing desktop internet usage. It is essential to cater to this requirement. All e-commerce websites must implement responsive website design that is optimised to view on all standard screen sizes, from mobile to tablet to desktop.

Responsive e-commerce websites cannot be ignored as it facilitates much more than website sales but also integrates into the complete Omni channel customer journey. Due to the easy accessibility of mobile devices, large amounts of time is spent browsing, leading to more online as well as in-store purchases. Investment in mobile has become standard practice, and the user experience should be optimised to achieve the full potential of this.

Best Practice:

- Design for multiple screen resolutions
- Back button should be functional
- Checkout forms should be quick and easy to complete
- Use universally understood icons for navigation, search, wish list, and shopping cart to avoid page clutter
- Replace the listed dropdown menu with a "hamburger" menu on mobile resolution
- Functions of predictive text, auto-correct, and auto-spelling should be included in search
- Use the correct button sizes for mobile to facilitate the size of fingers on touch screens
- Colour contrast ratios should be optimised so that the screen is legible in direct sunlight
- Do not use large fixed width elements
- Content should not rely on a particular viewport width to render well
- Use relative sizes for elements to avoid breaking layout
- Design for the smallest mobile device first; then progressively enhance the experience as more screen real estate becomes available
- Keep lines of text to a maximum of around 70 or 80 characters
- Use the meta viewport tag to control the width and scaling of the browser's viewport.

11. Appendix

A. E-Commerce Checklist

To effectively rate the e-commerce implementation of the website, each heuristic should be used as criteria and given a score based on performance within the site.

Scoring is based on a scale of 0 to 1.

0 = Not applied
 1 = Applied

Each category should be translated into an accumulative score in order to gain an understanding of where problems may lie.

E-commerce Scorecard		Score (0 - 1)
No.	E-commerce Criteria	
1	Business Strategy	
1.1	The Unique Selling Point of the business has been identified	
1.2	Research methodology has been implemented to gain an understanding of the customer	
1.3	The brand position, tone and style has been determined	
1.4	A product team has been organized	
2	Legal	
2.1	The Qatar Electronic Commerce and Transactions By Law is adhered to	
2.2	Terms and conditions have been outlined and explicitly stated on the website	
3	Payment	
3.1	Applicable payment types have been selected	
3.2	A certified payment gateway has been utilized for card payments	
4	Logistics	
4.1	Integration with Qatar Post has been established	
5	Security	
5.1	A secure connection is used for checkout (SSL)	
5.2	Digital certificates have been implemented to enhance the security	
5.3	Site content is encrypted	
5.4	A combination of upper and lower case, numbers and special characters is requested for user passwords	
5.5	Tracking numbers are used for all orders	
5.6	Online and local backups have been configured	
6	Platforms	
6.1	A leading e-commerce platform is utilized	
7	Marketing	
7.1	A comprehensive marketing strategy and plan has been devised	
8	SEO	
8.1	A comprehensive SEO strategy and plan has been devised	

8.2	SEO metrics are tracked and monitored	
9	Reporting and Analytics	
9.1	Key objectives and metrics are established	
9.2	Metrics are tracked and reported accordingly	
10	User Experience	
10.1	A standard UX process is followed with all product design	
10.2	Thorough requirement gathering and research is conducted	
10.3	The website strategy is implemented based on analysis of the research	
10.4	Designs are validated using user research methodology	
10.5	Functions within the User Experience Toolkits are utilized accordingly	
11	UI and Design	
11.1	A visual identity has been established and is consistently used across all elements of the design	
11.2	The page layouts are consistent, well-structured and provide a sense of hierarchy	
11.3	Buttons adhere to usability guidelines, and are consistent and labelled correctly	
11.4	Icons adhere to usability guidelines, and are consistent and labelled correctly	
11.5	Typography is readable, legible and consistent	
11.6	Colour has been used to provide both aesthetic value and meaning	
11.7	Imagery is rich, unique and consistent	
11.8	Animation uses a scientific approach to convey meaning and enhance the interface	
12	Pages, Features and Functionality	
12.1	The home page includes all relevant features and functionality	
12.2	Clear and optimal categories have been used	
12.3	Best sellers, popular items and offers are given prominence	
12.4	It is easy to switch between different languages (English and Arabic)	
12.5	Category landing pages are used wherever necessary	
12.6	Navigation is obvious, clear and consistent	
12.7	Search functionality is made prominent with added filtering options	
12.8	Product listing pages provide easy scanning and filtering	
12.9	Product detail pages a descriptive and content rich	
12.10	Strong Call To Actions have been utilized to promote conversion	
12.11	A persistent shopping cart has been applied across the website	
12.12	Checkout processes are quick, logical and easy	
12.12	Guest checkout is enabled	
12.13	Contact information and support is provided explicitly throughout the site	

12.14	The post-sale experience has been optimized to provide value to the customer	
12.15	Users are given the ability to login and track order status, manage orders and update details	

B. Web Usability Checklist

To effectively rate the complete experience of the website, each heuristic should be used as criteria and given a score based on performance within the site.

Scoring is based on a scale of 1 to 5.

- 1 = Extremely poor
- 2 = Poor
- 3 = Average
- 4 = Good
- 5 = Extremely good

Each category should be translated into an accumulative score in order to gain an understanding of where problems may lie.

Usability Scorecard		Score (1 - 5)
No.	Usability Criteria	
1	Findability	
	Navigation	
1.1	Navigation options are clear, intuitive and consistent	
1.2	Navigation ensures tasks are easy to perform	
1.3	There is clear context of place and of routes forwards and backwards	
	Information Architecture	
1.4	Information is organized and grouped effectively	
1.5	Naming and labelling of information is clear and descriptive	
1.6	The breadth and depth of menus is appropriate	
	Routing	
1.7	No broken links, is easy to access and is search engine optimized	
2	Intuitiveness	
	Simplicity	
2.1	Interaction model and use of controls avoids confusion	
2.2	Complexity has been reduced to manageable levels	
	Obviousness	
2.3	There is a match between the system and the real world	

3	Efficiency	
3.1	Windows and workspaces have appropriate relationships	
3.2	Tasks can be completed with minimum effort	
3.3	System performance matches expectations and tasks	
4	Clarity	
	Visual Structure and Layout	
4.1	Layout and visual design build comprehension and visual hierarchy	
4.2	Design correctly uses attention and grouping cues	
	Visual Elements	
4.3	Colour - Shows relationships and status, draws attention, with discretion	
4.4	Graphics - Enhances layout, meaningful, aligned to brand	
4.5	Text - Legible and scalable, with good typography and visual contrast	
	Content	
4.6	Content - Correct tone, supports decisions, sufficient, clear and concise	
4.7	Privacy and security are maintained	
4.8	Feedback and system status are clear and promptly provided	
5	Learnability	
	Familiarity	
5.1	Patterns, elements, interaction and presentation styles are familiar	
5.2	Uses common terms, metaphors and naming conventions	
	Consistency	
5.3	Design elements are placed and used in a consistent manner	
5.4	Language is consistent in terminology, style and construction	
	Support	
5.5	Explanations, guidance and instructions provided to avoid confusion	
5.6	Help system is valuable, contextual and integrated	
6	Forgiveness	
6.1	Errors are prevented from occurring	
6.2	It is easy to identify, understand and recover from errors	
7	Accessibility	
7.1	Disabilities and ease of access have been catered for	

8	Relevance and Value	
8.1	Content is current, comprehensive and correct for the audience	
8.2	Features and offerings are useful and meet user’s needs	

C. Definitions

404 errors	404 is a frequently seen status code that tells a Web user that a requested page is “Not found.”
Administration Module	Used to administrate products, prices, orders, offers, invoices, customers, financials and product packaging.
ALT and TITLE attributes	The HTML attribute used in HTML and XHTML documents to specify alternative text (alttext) that is to be rendered when the element to which it is applied cannot be rendered.
Animation	The technique of photographing successive drawings or positions of puppets or models to create an illusion of movement when the film is shown as a sequence.
Autofill	A software function that completes data in browser forms without the user needing to type it in full.
B2B	Business to business, also called B to B or B2B, is a type of transaction that exists between businesses, such as one involving a manufacturer and wholesaler, or a wholesaler and a retailer.
B2C	Business to consumer (B2C) is business or transactions conducted directly between a company and consumers who are the end-users of its products or services.
Call to Action (CTA)	An exhortation or stimulus to do something in order to achieve an aim or deal with a problem.
Categories	A class or division of people or things regarded as having particular shared characteristics.
Chunked	Group together (connected items or words) so that they can be stored or processed as single concepts.
Cognitive load	Cognitive load refers to the total amount of mental effort being used in the working memory. Cognitive load theory was developed out of the study of problem solving by John Sweller in the late 1980s. Sweller argued that instructional design can be used to reduce cognitive load in learners.
Cognitive science	The study of thought, learning, and mental organization, which draws on aspects of psychology, linguistics, philosophy, and computer modelling.
consumer	A person who purchases goods and services for personal use.
Content Management System (CMS)	A term and has not been endorsed with a solid definition. A CMS can have multiple meanings depending on the scenarios and the person’s or project objectives.

Contrast	The state of being strikingly different from something else in juxtaposition or close association.
Conversion	The process of changing or causing something to change from one form to another.
Cookies	Information that a Web site puts on your hard disk so that it can remember something about you at a later time.
Coupon codes	A computer-generated code, consisting of letters or numbers that consumers can enter into a promotional box on a site's shopping cart (or checkout page) to obtain a discount on their purchase.
Customer Lifetime Value (CLV)	A prediction of the net profit attributed to the entire future relationship with a customer.
Cyber criminals	Computer related crime, is crime that involves a computer and a network. The computer may have been used in the commission of a crime, or it may be the target.
Data visualization	The representation of information in the form of a chart, diagram, picture, etc.
Defaults	A preselected option adopted by a computer program or other mechanism when no alternative is specified by the user or programmer.
e-billing	Electronic billing or electronic bill payment and presentment, is when a company, organization, or group sends its bills over the internet, and customers pay the bills electronically.
e-commerce	E-commerce (electronic commerce or EC) is the buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the internet.
e-payment	An electronic payment system is a way of paying for a goods or services electronically, instead of using cash or a check, in person or by mail.
Encrypted	Convert (information or data) into a code, especially to prevent unauthorized access.
FAQ	A list of questions and answers relating to a particular subject, especially one giving basic information for users of a website.
Field labels	You can assign text information to a data element with the field labels. The field labels are used to display a screen field.
Fonts	A set of type of one particular face and size.
Gestalt principles	Gestalt is a psychology term, which means "unified whole". It refers to theories of visual perception developed by German psychologists in the 1920s. These theories attempt to describe how people tend to organize visual elements into groups or unified wholes when certain principles are applied.
Gestalt principles	Gestalt is a psychology term, which means, "unified whole". It refers to theories of visual perception developed by German psychologists in the 1920s. These theories attempt to describe how people tend to organize visual elements into groups or unified wholes when certain principles are applied.
Google Analytics	A freemium web analytics service offered by Google that tracks and reports website traffic.

Grid systems	A grid system is a set of measurements a graphic designer can use to align and size objects within the given format.
Grouped	Put into categories; classify.
Hackers	A person who uses computers to gain unauthorized access to data.
Heat maps	A representation of data in the form of a map or diagram in which data values are represented as colors.
Heuristic	Proceeding to a solution by trial and error or by rules that are only loosely defined.
Hierarchy	A system in which members of an organization or society are ranked according to relative status or authority.
High-chroma	The quality lightness or darkness. That is, black is a dark value or low value. White is a light value or high value. Chroma: the quality of a color's purity, intensity or saturation. For example: A gray color is a neutral -- an extreme low chroma.
Human computer interaction (HCI)	The study of how people interact with computers and to what extent computers are or are not developed for successful interaction with human beings.
HyperText Transfer Protocol (HTTP)	The underlying protocol used by the World Wide Web and this protocol defines how messages are formatted and transmitted, and what actions Web servers and browsers should take in response to various commands.
Iconography	The visual images and symbols used in a work of art or the study or interpretation of these.
Internet Protocol (IP)	A digital media transport system that runs over standard IP networks
ISO	The International Organization for Standardization (ISO) is an international standard-setting body composed of representatives from various national standards organizations. Founded on 23 February 1947, the organization promotes worldwide proprietary, industrial and commercial standards.
Legible	Clear enough to read.
META tags	Meta tags are snippets of text that describe a page's content; the meta tags do not appear on the page itself, but only in the page's code.
Metric	A system or standard of measurement.
Minimum viable products (MVP)	A development technique in which a new product or website is developed with sufficient features to satisfy early adopters. The final, complete set of features is only designed and developed after considering feedback from the product's initial users.
Navigation	The process or activity of accurately ascertaining one's position and planning and following a route.
Pay-per-click (PPC)	An internet advertising model used to direct traffic to websites, in which an advertiser pays a publisher (typically a website owner or a network of websites) when the ad is clicked.
Personas	The aspect of someone's character that is presented to or perceived by others.

Point of sale (POS)	An electronic device used to process card payments at retail locations. A POS terminal generally does the following: Reads the information off a customer's credit or debit card.
Port scanning	A series of messages sent by someone attempting to break into a computer to learn which computer network services, each associated with a "well-known" port number, the computer provides.
Promotion	The publicizing of a product, organization, or venture so as to increase sales or public awareness
Readability	The quality of being legible or decipherable.
Return on Investment (ROI)	Expressed as a percentage and is typically used for personal financial decisions, to compare a company's profitability or to compare the efficiency of different investments.
Saturated	(Of color) very bright, full, and free from an admixture of white.
Scalable	Able to be changed in size or scale.
SDK	A software development kit (SDK or devkit) is typically a set of software development tools that allows the creation of applications for a certain software package, software framework, hardware platform, computer system, video game console, operating system, or similar development platform.
Search engine	A program that searches for and identifies items in a database that correspond to keywords or characters specified by the user, used especially for finding particular sites on the World Wide Web.
Search Engine Optimization (SEO)	The process of maximizing the number of visitors to a particular website by ensuring that the site appears high on the list of results returned by a search engine.
Server	A computer or computer program, which manages access to a centralized resource or service in a network.
Social media	Websites and applications that enable users to create and share content or to participate in social networking.
Spam	Irrelevant or unsolicited messages sent over the Internet, typically to a large number of users, for the purposes of advertising, phishing, spreading malware, etc.
SSL (Secure Sockets Layer) encryption	The standard security technology for establishing an encrypted link between a web server and a browser. This link ensures that all data passed between the web server and browsers remain private and integral.
STB	A set-top box is a hardware device that allows a digital signal to be received, decoded and displayed on a television.
Target audience	A particular group at which a product such as a film or advertisement is aimed.
Taxonomy	The branch of science concerned with classification, especially of organisms; systematics.

TITLE tags	A title tag is an HTML element that specifies the title of a web page. Title tags are displayed on search engine results pages (SERPs) as the clickable headline for a given result, and are important for usability, SEO, and social sharing.
Trojan horses	A program designed to breach the security of a computer system while ostensibly performing some innocuous function.
Typography	The style and appearance of printed and digital matter.
URL	The address of a World Wide Web page
Usability test	A technique used in user-centered interaction design to evaluate a product by testing it on users.
User Experience (UX)	The overall experience of a person using a product such as a website or computer application, especially in terms of how easy or pleasing it is to use.
User interface (UI)	The means by which the user and a computer system interact, in particular the use of input devices and software.
User Journeys	A person's experience during one session of using a website or application, consisting of the series of actions performed to achieve a particular goal.
USP	A unique selling proposition (USP, also seen as unique selling point) is a factor that differentiates a product from its competitors, such as the lowest cost, the highest quality or the first-ever product of its kind.
Viruses	A piece of code, which is capable of copying itself and typically has a detrimental effect, such as corrupting the system or destroying data.
W3C	The World Wide Web Consortium (W3C) is an international community where Member organizations, a full-time staff, and the public work together to develop Web standards. Led by Web inventor Tim Berners-Lee and CEO Jeffrey Jaffe, W3C's mission is to lead the Web to its full potential.
White space	In page layout, illustration and sculpture, white space is often referred to as negative space. It is the portion of a page left unmarked: margins, gutters, and space between columns, lines of type, graphics, figures, or objects drawn or depicted.
Wi-Fi	A facility allowing computers, smartphones, or other devices to connect to the Internet or communicate with one another wirelessly within a particular area.
Wireframe	An image or set of images, which displays the functional elements of a website or page, typically used for planning a site's structure and functionality.
Worms	A standalone malware computer program that replicates itself in order to spread to other computers.

12. Bibliography

Publications

Name	Date	Authors and Details
Affective Design of E-Commerce User Interfaces: How to Maximise Perceived Trustworthiness. Proceedings of The International Conference on Affective Human Factors Design	2001	Helander, Khalid and Tham (Editors). Asean Academic Press, London, Florian N. Egger. IPO, Center for User-System Interaction, Eindhoven University of Technology, PO Box 513, 5600MB Eindhoven, The Netherlands.
B2C E-commerce web site quality: An empirical examination		Industrial Management and Data Systems, 105 (5), pp. 645-661. M. Cao, Q. Zhang, and J. Seydel
Complete list of web accessibility evaluation tools	2014	W3 Schools, Web Accessibility Initiative
Consumer behavior	1978	J. F. Engel, R. D. Blackwell, and D. T. Kollat, , 3rd ed. Hinsdale: Dryden Press
DESIGNING PERSONALIZED USER EXPERIENCES IN e-commerce. HUMAN-COMPUTER INTERACTION SERIES VOLUME 5	2004	Editors-in-Chief John Karat, IBM Thomas Watson Research Center (USA) Jean Vanderdonckt, Université Catholique de Louvain (Belgium)
Designing with the mind in mind	2010	Jeff Johnson
Ecommerce analytics for absolute beginners	2015	Ramon Bez, Shopify
e-commerce Architecture Best Practices	2016	
ECOMMERCE BEST PRACTICES: Optimizing the User Experience	2014	Jagged peak
Ergonomics of human system interaction – Part 210: Human-centered design for interactive systems (formerly known as 13407)	2008	Switzerland: International Standardization Organization, ISO DIS 9241-210:2008
Evaluating e-commerce functionality with a focus on customer service	2001	Communications of the ACM, 47 (1), pp. 88-92. N. J. Lightner
GUIDELINES FOR INDIAN GOVERNMENT WEBSITES An Integral Part of Central Secretariat Manual of Office Procedure	2009	Government of India
Heuristic evaluation, in Usability Inspection Methods,	1994	J. Nielsen and R.L. Mack, Eds. New York: John Wiley and Sons pp. 25-62.
Lean UX	2013	Jeff Gothelf
NEURO WEB DESIGN	2009	SUSAN M. WEINSCHENK, PH.D.
Oracle. Optimizing the Ecommerce Experience: Trends for 2011	2011	Oracle

Proceedings of the World Congress on Electrical Engineering and Computer Systems and Science (EECSS). An Investigation of User-Experience Design of E-Commerce Websites.	2015	Mahmut Ekşioğlu, Sevgican Varol, Yusuf Duman Ergonomics Laboratory, Dept. of Industrial Engineering, Boğaziçi University 34342 Istanbul, Turkey
The Future of Shopping	2013	Jorij Abraham, Ecommerce foundation
The guide to usability testing	2016	Chris Bank, UX Pin
The open repository of heuristics	2013	Proceedings of the 13th International Conference on Interacción Persona-Ordenador (INTERACCION '12). ACM, New York, NY, USA. L. Masip, M. Oliva, and T. Granollers
The Principles of B2B e-Commerce: A Guide for U.S. Businesses	2015	A U.S. Department of Commerce White Paper Written By: James Bledsoe e-Commerce Specialist U.S. Commercial Service
The Seventh International Conference on Advances in Computer-Human Interactions. A Set Of Heuristics for User Experience Evaluation in E-commerce Websites	2014	Laia Bonastre, Toni Granollers. University of Lleida. Lleida, Spain
User Experience in Personalized E- Commerce: A Configurational Approach Full Paper	2016	Ilias O. Pappas, Patrick Mikalef, Michail N. Giannakos Department of Computer and Information Science, Norwegian University of Science and Technology (NTNU)
UX and UI BEST PRACTICES GUIDELINES: Optimize the customer journey to improve the shopping experience and increase conversion rates	2014	OSF global services.
UX Strategy	2017	Jaime Levy

