

A cloud based e-commerce storefront prototype for SMEs in Oman.

ABSTRACT

This project aims to develop a cost effective, highly and easily customizable e-commerce store prototype using cloud tools, which would help the Omani SMEs and entrepreneurs who are seeking ways to bring their products and services online. The project would also help in-store sellers who are shifting to e-commerce business model to benefit the surges in online shopping over COVID 19 concerns.

SME's in any domain or industry can easily adopt this e-commerce store model as a baseline to have a well-designed e-business website to attract customers and offer an easy shopping experience.

The proposed project will deliver a highly responsive e commerce shopping site with:

1. Multi-language UI or Storefront - [Arabic & English]
2. Multi-Currency Support [OMR & USD]
3. Automated Email notifications
4. Social Media Integration
5. Test Payment Gateway Integration and Online check out.
6. Stock & Inventory Management
7. Web Live Chat.

Introduction and Statement of the Problem / Project *

E commerce business model is growing and getting bigger day by day. Especially, the concern over Covid 19, more people prefer e-commerce stores for shopping as they wish to avoid public places like shopping malls and retail shops.

To take advantage of this shift, sellers are looking for ways to adopt e-commerce business model. However, direct cost involved in hardware and software, security concerns and lack of technical expertise are major barriers and results in delay in the adoption of e-commerce business model.

Proposed project will be developed using cloud tools so that the software for development and hardware for deployment will be available over the internet on a subscription basis. Also, the project will be integrated and interfaced to industry ready apps provided by third party hosts to reduce the development effort and quick delivery, this will also address the security concerns as the project will be interfaced with the systems provided by reputed third party companies.

Hence, this model will serve as a baseline for B2C sellers who are looking for a quick, secure and cost effective way to adopt e commerce business model.

Literature Review and Analysis of Related Work *

According to Adobe analytics, which monitors the e-commerce transactions of major US e commerce companies, “Mounting concern over the COVID-19 outbreak in the United States is having an impact on online shopping behavior”¹

According to an article published in Oman Observer, Akeed, a major Omani food delivery application started noticing a hike in orders when the Ministry asked people to stay home in view of COVID 19. According to an official in Akeed, “We have noticed a 27 percent increase in our orders post the recent statements from Supreme Committee.” ²

According to Internet live stats, “since 2005, there is a steady growth in the number of internet users in Oman”. ³

However, According to Mordor Intelligence, a market advisory and intelligence firm, “The E-commerce market in Oman accounts to only 1% of total sales. It is still a nascent market and have ample opportunities to grow in future.”⁴

Though most of the popular e-commerce giants like Amazon and eBay deliver the products to Oman, Customers have to wait for several weeks to get their items delivered. A recent research to study the factors influencing online shopping in Oman reveals that the time required to deliver products is major concern to customers.⁵

Sabhi Saleh has published an article in International of business and management studies. The title of the article is “BUSINESS, BARRIERS AND BENEFITS: E-BUSINESS FOR SME’S IN THE SULTANATE OF OMAN”

During the study it was found that “the direct cost involved in hardware and software solutions is one of the main reasons in conducting e-business by SMEs in Oman which caused slow adoption and resulted delay in the adoption of internet technology for their business activities”.

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Objectives *

- Design and develop a responsive and customizable e-commerce storefront or UI model.
- Integrate the system to different third party apps like Omannet Payment Gateway and Google Analytics, Facebook Messenger etc.
- Develop Multi-Language UI - English & Arabic
- Develop Multi-Currency support - OMR & USD
- Develop automated email functionality - Customer Registration and order confirmation, abandoned cart etc.

- Social Media Integration.
- Stock and Inventory Management - track the stock and prompt out of stock message when inventory runs out.
- Bulk product import and export operations using CSV files.
- Integrate the store with Google Analytics to get insights to site traffic and customer behavior.
- Web live chat - Integrate web live chat app for better customer support.
- Web hosting - Register a domain with web hosting company

Research Methodology [Describe your Implementation Plan, Time-line and Milestones] *

We will employ AGILE software development methodology to develop this system. A fully fledged e-commerce store model will be designed and developed through continues iteration. Multiple e-commerce cloud platforms will be explored and assessed against cost effectiveness and user friendliness. High level programming language, CSS, HTML will be used to implement the model. API documents will be reviewed to integrate the system to various interfaces like Oman-net Bank Muscat Payment gateways, Google Analytics, Multi-language and Multi-Currency third part systems etc. The system will be deployed over internet with unique domain registered, will be accessible for the public. This project will be started immediately after the approval from the concerned authority and expected to be completed within 4 months from the start date.

Academic, Scientific and/or Innovation Significance *

This project will boost the confidants of hundreds of Omani entrepreneurs or SMEs who are delaying e-commerce adoption due to:-

1. Cost involved in software and hardware
2. Security concerns
3. Lack of technical expertise

We believe number of Omani entrepreneurs will come forward to adopt this model as the proposed system will be addressing all above issues and this will set a trend and contribute towards building a digital community in the Sultanate.

Benefits to Oman *

Some of the Keys benefits:

1. Help Omani entrepreneurs to sell worldwide and contribute to the country's economic growth.

2. Project contribute to the efforts putting forward by Information Technology Authority and various other government authorities to build Oman's digital society.
3. Help to export Made in Oman products as the proposed model can be accessed worldwide.

References *

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