

# CDO BITES WEB PORTAL AND SOCIAL NETWORK

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**ABSTRACT:** *Technology business incubators or TBIs in universities are crucial drivers of entrepreneurship in universities. CDO b.i.t.e.s is one of the granted TBIs funded by the Department of Science and Technology and the University of Science and Technology of Southern Philippines. Considering their clientele and external stakeholders, developing a web portal and social network is crucial to their startup submission and reach. This will also aid CDO b.i.t.e.s to be efficient and organized in information and resources sharing, and encapsulating submissions by their startups. The end result was a web portal that was considered feasible and user-friendly to the incubates and the CDO b.i.t.e.s management that is true to their demands and needs. Furthermore, the social network was a wonderful addition to the online gathering and discourse of incubatees and management.*

**Keywords:** TBI, technology business incubator, web portal, incubator web portal

## 1. INTRODUCTION

Technology Business Incubation (TBI) is one of the strategies identified by the Department of Science and Technology (DOST) to promote innovation and technopreneur ship for the country's socio-economic development in a knowledge-based world economy. They promote the concept of growth through innovation and application of technology, support economic development strategies for small business development, and encourage growth from within local economies, while also providing a mechanism for technology transfer. One of the technology business incubations in the Philippines and the first of its kind in Northern Mindanao is the CDO b.i.t.e.s [1]. CDO b.i.t.e.s (Business Incubation Technology Entrepreneurship and Startups) is a technology business incubation hub that started on October 2016 as a joint project of DOST PCIEERD (Department of Science and Technology-Philippine Council for Industry, Energy and Emerging Technology Research and Development) and USTP (University of Science and Technology of Southern Philippines), that aimed at providing IT/ICT-based start-up and budding industries and individuals a suitable venue to promote growth and development in the fields of software and application as well as multimedia development. CDO b.i.t.e.s provides a range of resources, services, and facilities to ensure that tenant entrepreneurs will have fully experienced the needed capacity building and acquire the necessary skills to mature as a financially viable and market-competent industry. CDO b.i.t.e.s will also be an ideal training ground for start-up companies to hone their marketing skills as workspaces provided by the incubation center can serve as offices to transact business and market products. The absence of an office to cater to business deals is among the primary concern of start-up companies and CDO b.i.t.e.s can fulfill such a gap. For entrepreneurs interested in producing IT/ICT-based products and services but lack the needed facilities to develop and commercialize their products, CDO b.i.t.e.s can appropriately realize these needs, at the same time benefiting from the capacity-building activities that CDO b.i.t.e.s will provide to fill in knowledge gaps, enhance business acumen and meet potential partners and/or clients. All these benefits are afforded to all CDO b.i.t.e.s tenants with minimal monthly charges and other miscellaneous expenses. As the world transformed into a modernized style where technology rules the everyday task of all people, new trends in technology have dramatically changed the style of almost all business sectors.

Many business sectors try to cope and are more likely to indulge in a new and unique platform where they can promote their businesses and stay competitive [2, 3, 4]. The opportunities provided by this platform are immense and many organizations are making use of this platform to better their services. Some of these platforms are online portals and social networks.

A web portal, also known as a links page, presents information from diverse sources in a unified way. They go beyond static web pages and require a sign-on that links to some knowledge the organization has collected about the visitor [5, 6]. It gathers information from different sources and put it all together in a single place which can help in accessing information by several users. It provides the users with a single point of content, data, and services [7]. It can be personalized depending on the role of the user in the organization. There are different types of portals: general, community, horizontal, vertical, enterprise, personal, and niche.

## 2. OBJECTIVES OF THE STUDY

The main objective of the study is to develop an online portal and social network application for CDO b.i.t.e.s that will help the organization to be more efficient and convenient when it comes to their transactions, most importantly in disseminating information regarding the start-ups.

The proposed study can be broken down into more specific objectives:

- 1) To design a user-friendly website to easily use and access the contents of the web application;
- 2) To design and develop an online social network service by which incubates, CDO b.i.t.e.s team, and investors can establish a network among the people in the community. All the information can be easily accessed and shared among the people;
- 3) To develop a web application for managing data in the administrator and for users to login into the portal of CDO b.i.t.e.s which will provide a convenient way for users to store their login credentials;
- 4) To test whether the proposed system is an effective way of improving CDO b.i.t.e.s' process and services;

## 3. SCOPE AND LIMITATION OF THE STUDY

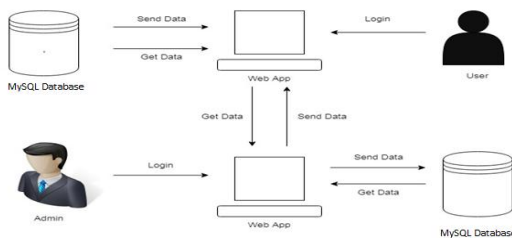
This project designed entitled CDO b.i.t.e.s Web Portal and Social Network is to change the traditional way into an automated and efficient way. This system can help the admin and the marketing officer in handling the information and

records of the incubators, startups, staff, investors, and the company. It is expected to generate reports of users, a report list of incubators, a report list of activities and evaluations, a report list of computer requests, and a report list of conference room reservations.

This study is limited only to the information, updates, policies, news, events, or activities of CDO b.i.t.e.s. The only users who can log in are those who are members of the organization. Users involved are incubators of CDO b.i.t.e.s. staff such as administrators, Marketing Officers, IT officers, and investors who can view different startups and information regarding CDO b.i.t.e.s and can interact with the people in the community.

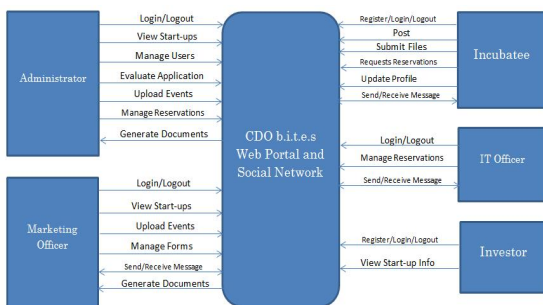
**4. METHODOLOGY**

Below presents the development process in order to create the CDO b.i.t.e.s. web portal and social network.



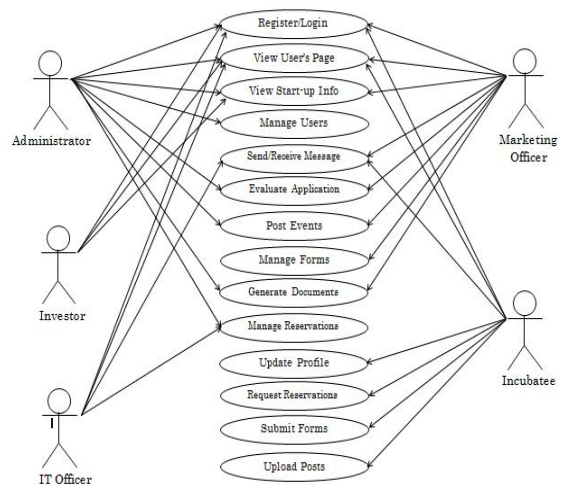
**Figure 1: System Architecture for CDO b.i.t.e.s Web Portal and Social Network**

Figure 1 shows the system architectural design of the proposed system. The web application provides startup members' information sent through the MySQL database. After the transaction, the startup member sends data to the web application. The web application is accessed only by the administrator then all the submitted data from the web portal application is sent to the MySQL database. The user or startup member will get data from MySQL database.



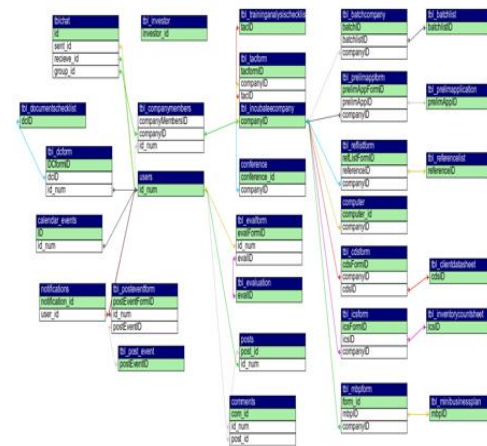
**Figure 2: Context Flow Diagram**

Figure 2 shows the context flow diagram of the portal that represents a high-level view of the overall system boundary of interest. The portal includes incoming and outgoing data flows linked to participating entities which are the Administrator, the Marketing, the IT officer, the Incubatee, and the Investor. Every entity can access through CDO b.i.t.e.s web portal process.



**Figure 3: Use Case Diagram**

Figure 3 shows the use case diagram of the application. The admin can view startup information, manage user accounts, post events, evaluate applications, manage requests and reservations, and generate documents. The Investor can view startup information. Also, an IT officer can manage reservations, and notify and can send/receive messages. The marketing officer can manage forms, can view startups, evaluate applications, and send/receive messages. The incubated can create an account, view notifications can view/edit profiles, can access forms, view reservation schedules for reservation purposes, and can send/receive messages.



**Figure 4: Database Design**

Figure 4 shows the database design of the web application. It has to be noted that there can be a lot of incubatees at any given time as CDO b.i.t.e.s. implements a cohort-based approach.

**5. RESULTS AND DISCUSSION**

Presented in the next paragraphs are the results of the survey and discussion gathered from the management and incubates.

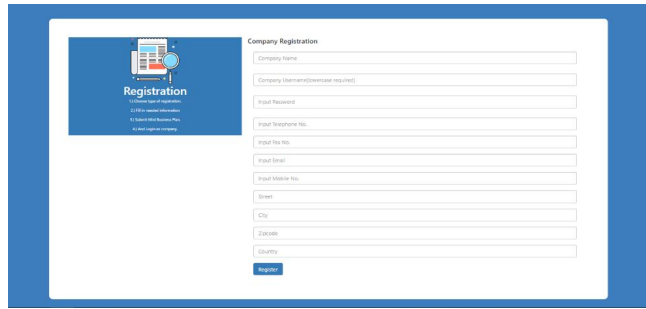


Figure 5: Registration

A web application was successfully created. Each incubate will have to register their company in the platform. Pertinent information is needed in order to be considered and approved.



Figure 6: Mini Business Plan

Each incubates prior to being accepted in CDO b.i.t.e.s. cohort needs to submit a mini business plan. They need to fill this up as this serves as their application to the next cohort.

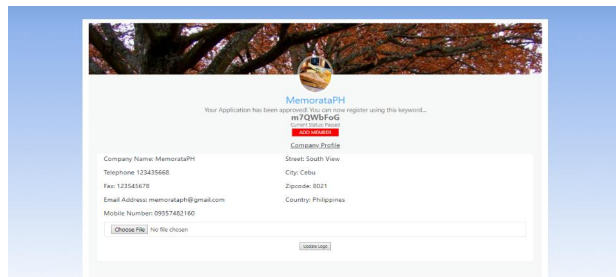


Figure 7: Company Profile

Company Profile Page where the incubatee can see if their application is approved or denied. If the Mini Business Plan application has been approved the company will be given a unique keyword that will be used to register members in one company.

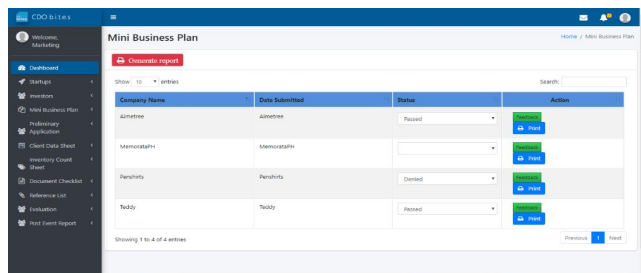


Figure 8: Admin Mini-Business Plan View

In the marketing page, you can see the Startups list, Investors,

Mini Business Plan, Preliminary Application, Client Data Sheet, Inventory Count Sheet, Document Checklist, Reference List, Evaluation, and Post Event Report.

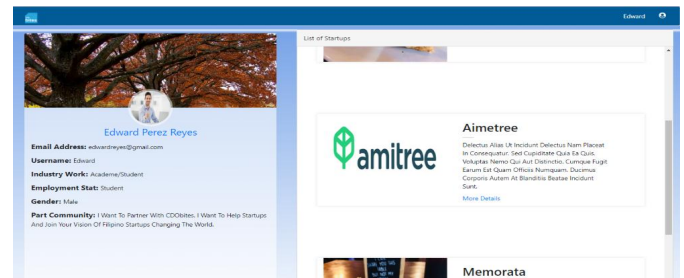


Figure 9: Investor View

Investors are crucial stakeholders for further startup support. They too will have a stake in the CDO b.i.t.e.s portal by registering first to the platform. After successful registration, they will get to see the profile of the startups and from there, contact and connect using the portal. The portal was tested on CDO b.i.t.e.s incubatees based on usability and ease of use. There are a total of 7 respondents.

Table 1: Usability Test Results

		Percentage	
1.1	Overall, I am satisfied with how easy it is to use the portal.	100.00	AGREE
2.2	It is simple to use the portal.	90.48	AGREE
3.3	I am able to complete my work quickly using the portal.	95.24	AGREE
4.4	I feel comfortable using the portal.	95.24	AGREE
5.5	It was easy to learn to use the portal.	95.24	AGREE
6.6	I believe I could become productive quickly using the portal.	100.00	AGREE
7.7	The portal gives error messages that clearly tell me how to fix problems.	80.95	AGREE
8.8	Whenever I make a mistake using the portal, I recover easily and quickly.	95.24	AGREE
9.9	The information (such as online help, and others) provided with the portal is clear.	95.24	AGREE
10.10	It is easy to find the information I needed.	100.00	AGREE
11.11	The information provided with the portal is effective in helping me complete my work.	100.00	AGREE
12.12	The organization of information on the portal screen is clear.	95.24	AGREE
13.13	The interface of the portal is pleasant.	95.24	AGREE
14.14	I like using the interface of the portal	95.24	AGREE
15.15	The portal has all the functions and capabilities I expect it to have.	100.00	AGREE
16.16	Overall, I am satisfied with the portal.	100.00	AGREE

Table 1 provides the Usefulness feedback of the respondents. This shows the application’s usability based on the rating they gave as they tested the portal [8]. Based on the table above showing the overall usability testing percentage, it can be concluded that the respondents agree with the overall ease of use and satisfaction with the app. The lowest agree percentage was question #7 at 80.95 The second lowest rating was question #2 at 90.48

6. CONCLUSION

Based on the findings of the study, the researcher was able to arrive at these conclusions: the researcher has successfully developed and designed the specific objectives: (1) a user-friendly website (2) a web application for managing data (3) an online social network service (4) webpage that monitors the availability of the conference room.

The created portal and social network meet the needs and the demands of CDO b.i.t.e.s. along with other features that were good to have for seamless communication and ease of processes of the incubator.

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