

Literature Review

***A Web-based E-marketing System for Small Enterprise and
Building Platform***

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1 Introduction

Now small enterprises (SME) have gradually become a significant force in the economy, many countries, including China, are spare no effort to support the development of small and medium-sized enterprises, encourage young people to start a business. The rapid progress of the Internet has provided many low-cost and efficient e-marketing platforms for SMEs. Website as one of the most important forms of the Internet, SMEs now can quickly build their own website to promote their own products, corporate image, or interact directly with customers at low cost.

Our project mainly concerns about building websites for a small business. Starting from the analysis of user (enterprise) requirement, we will apply software development process model, consolidate business strategies and activities that suitable for the SMEs with website. In addition to providing the enterprise with interactive functions with users, we also aim to attract more customers for the enterprise by improving the clicks volume of this website.

1.1 E-marketing

Electronic Marketing (E-Marketing) refers to the application of marketing principles and techniques via electronic media and more specifically the Internet. By reviewing the relevant literature, the meaning of E-Marketing varies according to individual point of view. There is a condensed definition from Smith and Chaffey: “Achieving marketing objectives through applying digital technologies” [1]. While Hatem defined it as: “A new philosophy and modern business practice involved with the marketing of goods, services, information and ideas via Inter and other electronic means” [2].

The terms E-marketing, Internet marketing and E-commerce are frequently interchanged and can often be considered synonymous, which is incorrect because they are different. Generally speaking, E-commerce is a macro that based online perspective of conducted business. E-marketing focus more on moving marketing activities and strategies to a computerized and networked environment. According to Ajit and Marios (2004), Electronic marking is an established research stream within electronic commerce [3]. Compared with Internet Marketing (IM), E-marketing is border scope that includes all computerized and networked tools such as mobile devices, internet media, digital media while Internet Marketing refers only to the Internet. Figure 1 illustrates the relationship between E-Commerce, E-Marketing and Internet Marketing.

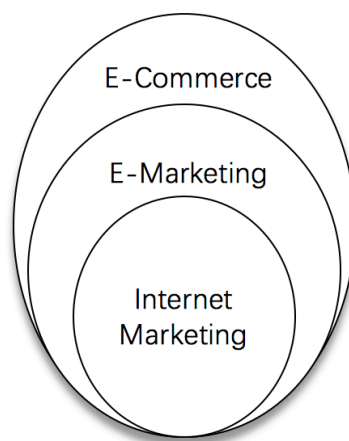


Figure 1: Relationship Model

1.2 Benefit of E-marketing

Differs from traditional marketing communication, E-marketing takes advantages of the Internet and other online environments. Internet helps adding the number of players involved in a business, according to Parminder and Ashutosh [4], the goal of E-marketing is to make it possible for online business to create cost-effective opportunities to stimulate, strengthen relationships with stakeholders and customers [4]. The diversity of communication forms of digital media also creates new forms and models for information exchange. Additionally, with automatic response through online applications, E-marketing breaks the limits of business in space and time.

Online market is 24-hours service; customers can enjoy services from different locations as long as they access to the Internet. Parminder and Ashutosh defined the following aspects as benefits of E-marketing [4]:

- a) Reduction in costs through automation and use of electronic;
- b) Faster response to both markers and the end user;
- c) Increased ability to measure and collect data;
- d) Opens the possibility to maker of one though personalization;
- e) Increased interactivity;
- f) Increased exposure of products and services;
- g) Boundless Universal accessibility.

1.3 Small Enterprises

Small and medium-sized enterprises (SMEs, also small and medium enterprises) or small and medium-sized business (SMBs) are businesses whose personnel numbers fall below certain limits. SMEs is an important carrier of the public undertaking. It has an irreplaceable role all innovation, increasing employment, promoting economic growth, science and technology innovation and social harmony and stability. Small enterprises have important strategic significance to the national economy and social development.

Compared with the maturity and perfection of large enterprises, SMEs have a large gap in the management system, talent allocation and capital, which have become the main obstacles for enterprises to apply informatization. According to statistics, there are more than 40 million small and medium-sized enterprises in China, and less than 10% of them realize informatization.

1.4 Advantages of Website

A website is a collection of related web pages, including multimedia content, typically identified with a common domain name, and published on at least one web server. From the perspective of E-marketing, the website is a comprehensive platform for realizing business strategy and focusing on corporate image, products and service content. By virtue of the powerful expression of the website, a website can achieve the above content through texts, pictures, videos and even interactive forms.

Now people can be easily anywhere at any time through mobile phones, computers, and even smart appliances anytime, anywhere access to the Internet. The website transfers traditional one-on-one customer service form into an online service that does not have space and time limits. Through the website, enterprises can collect and integrate user information more conveniently and collect user feedback timely. The website reduces the communication cost between enterprises and customers to a certain extent.

In addition, now cost of setting up a website gradually reduce as producing of new technologies such as cloud computing. SMEs don't even need to establish an IT department will be able to maintain their own online services. As a result, technological progress reduces the enterprise's operating costs and time costs.

1.4 Voyage International Volunteer Agency

Voyage International Volunteer Agency (VIVA) is a domestic typical SME, it cooperates with multiple overseas animal protection agency and community schools to recruit Chinese volunteers for these organizations. The VIVA currently has turtle conservation, elephant nursery schools, volunteer programs in Sri Lanka and teaching programs in Thailand and Malaysia. VIVA has sent nearly 1,000 volunteers to these countries in the past three years, uses mainly WeChat to propagandize its volunteer

programs. The project fee of each volunteer basically only includes accommodation and meals for volunteers at the project site.

2 Methodology

2.1 Process Model

2.2.1 Agile Software Development

Agile software development (Figure 2) is a kind of process model to software development that focuses on the evolution of user needs and adopts an iterative and gradual approach. This approach advocates adaptive planning, evolutionary development, early delivery and continuous improvement, and encourages rapid and flexible responses to change.

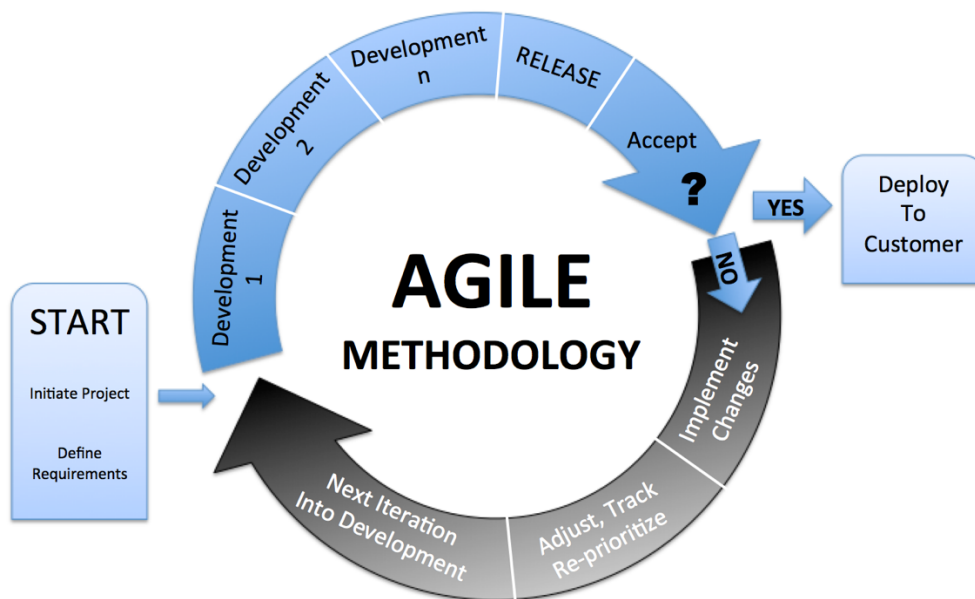


Figure 2: Agile Software Development Model¹

2.2.2 Agile Software Development Principles

Twelve principles have been defined in *Manifesto for Agile Software Development* [5]. Keeping these principles in mind can help us better understand agile development and complete development work under the guidance of these principles.

¹ Source: <http://www.cnblogs.com/LewisMen/p/5975324.html>

- Customer satisfaction by early and continuous delivery of valuable software;
- Welcome changing requirements, even in late development;
- Working software is delivered frequently (weeks rather than months);
- Close, daily cooperation between business people and developers;
- Projects are built around motivated individuals, who should be trusted;
- Face-to-face conversation is the best form of communication (co-location);
- Working software is the primary measure of progress;
- Sustainable development, able to maintain a constant pace;
- Continuous attention to technical excellence and good design;
- Simplicity—the art of maximizing the amount of work not done—is essential;
- Best architectures, requirements, and designs emerge from self-organizing teams;
- Regularly, the team reflects on how to become more effective, and adjusts accordingly.

2.2.1 Agile vs. Other Software Development Method

As a lightweight software development method, Agile development does not require heavy documentation, but focuses on software implementation. Similar to Spiral Mode (Figure 3), both approaches take advantages of prototype that provide clients an initial look for the software. Every iteration cycle of Spiral Model requires developers detailed documentation, such as Detailed Design, and continually modify the requirement plan. For small development teams, heavy document writing will occupy the development time apparently.

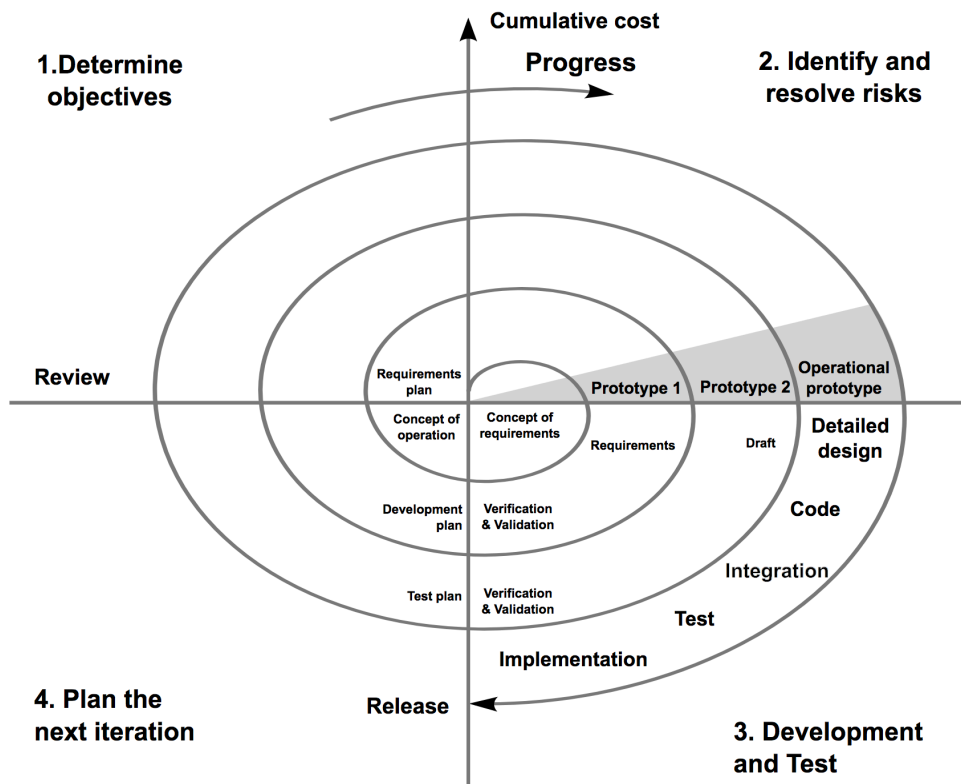


Figure 3: Spiral Process Model²

The proponents of agile software development usually oppose numerous of documentation, “too much or comprehensive documentation would usually cause waste”, Scott Ambler said, even though detailed document is usually out of synchronization with code. While agile software development advocates a moderate amount of documentation, meaning that documentation should be “just barely good enough” [9] since too little documentation can also lead to problems for communication, knowledge sharing, and late maintenance.

Waterfall model is first adopted software development model, which requires developers follow linear sequential design approach. Winston Royce introduced the famous "waterfall model" in 1970 and was the only widely used software development model till the early 1980s. The software testing phase is separated form building phase within waterfall mode, while testing is done in every iteration with agile model so that developers can test a small piece of software and validate the value. This character determines that development with a higher flexibility since

² Source: Spiral model (Boehm, 1988).

developers can make better decisions after testing, re-planning session then adjust development paths in each iteration.

3 Project outline

3.1 Development Phases

The entire software development process is mainly guided by agile software development. Before the start of the first iteration, it is significant to understand user requirement as much as possible, but requiring the user to give a comprehensive demand is impossible. Sometimes customers don't know what they want, unless you put something in front of them. The original customer requirements need to be recorded into the document, the Software Requirement Specification (SRS) is advantageous to the developers have a knowledge of overall architecture of our website, planning development tools, design data structure and deployment server environment, decomposing system into multiple subsystems for workload assignment.

3.2 Expected Main Features

3.2.1 Enterprises Servers Demonstration

This section is mainly based on the main body of the website, that is, the shaping of the corporate image, the display of corporate philosophy, and the introduction of corporate services. When users enter a website, the main body of the website should be able to catch their eyes and make sure they know what the purpose of website and the what the company is like in a glance. The homepage should be short, simple and clear to avoid wasting the customer's time [10]. Moreover, controls in a web site should be simple and easy to use to allow users to access the information they need efficiently.

3.2.2 Online Registration System

Online registration system allows users to sign up for the volunteer projects assigned by the volunteer organizations. Registration information includes project site, content of the project, project time period, condition of accommodation and airport pickup.

When selecting project time, volunteers can only select the available time period, which requires communicate timely with people who charge for the project site to get the time that volunteers can participate. Only valid time periods can be selected on the calendar. For the invalid time, volunteers can only see but unable to choose. After the user to complete the registration, the system will store the registration information, the user can log in and view the application form in the future, but the registration information cannot be changed, if the user because of an emergency can't arrive on time, or need to cancel the project schedule, the user needs to contact our customer service.

3.2.3 Implement Online Payment Interfaces

The system allows volunteers can pay online on the website after project registration. The price of project based on registration information. The function is not directly implement online payment, but to call other online payment interfaces such as online payment platform Alipay. Users will jump back to the homepage after paying.

3.2.4 Feedback

Both registered and unregistered users can fill in user feedback through the feedback form provided by the website. The feedback form will help us summarize and solve the problems raised by users.

3.2.5 Login and register

If users want to use online registration and online payment, they need to register as a full member. Users can register as members after filling in their username, password,

email and other user information. After logging in by username or email or password, users can go to their home page and check the registration information of their historical project.

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