Identifying E–Business Options

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INTRODUCTION

The past few years, many organizations have been using the Internet in quite arbitrary and experimental ways. This phase, which can be considered as a period of learning and experimentation, has created a need for a more systematic approach to the identification, the ordering and the assessment of e-business options. It is the objective of this paper to address this need by presenting a methodology that aims at supporting management in using alternative e-business applications in the first stage of the decision-making process.

Figure 1 shows how a systematic decision-making process can be organized by using e-business options. The steps are based on Simon's intelligence, design, and choice trichotomy (Simon, 1960). First, alternative e-business options have to be identified and ordered. Then the possible options have to be assessed and selected. After this stage the selected opportunities have to be specified and designed. Next, implementation, operation, maintenance, and evaluation may follow. In Figure 1 this is called the "formal life cycle". We will apply the word "e-business option" referring to the possibility to use an electronic network for a business purpose. An e-business opportunity is defined here as an assessed and selected e-business option.

In practice, different intermediate feedback activities, interrupts, delays and adjustments are often necessary to reconsider earlier steps (Mintzberg, Raisinghani, & Théorêt, 1976). This is—among other reasons—because decision-making processes of this kind take place in dynamic environments and decisions are made in political contexts (Pettigrew, 2002). Moreover, participants in decision-making processes are often lacking the necessary information to make well-considered decisions right from the start (Miller, Hickson, & Wilson, 1996). In Figure 1 these activities are called "intermediate feedback".

The methodology presented in this article focuses mainly on the first stage of the decision-making process: the identification of e-business options and the ordering of these options. Further, the focus is only on e-business options in the context of an organization and its current or new external stakeholders.

Figure 1. Focus of the article in the light of the desicion-making context
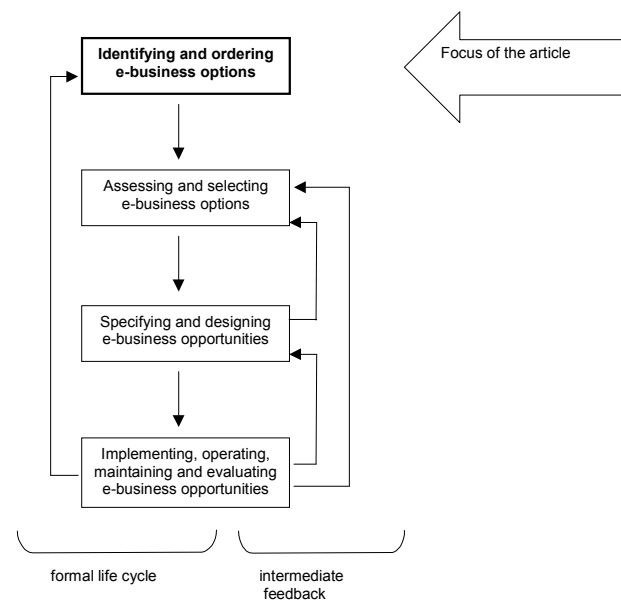
The methodology helps identify e-business options, describe them in a global way by specifying each option in six dimensions, and order them according to organization- dependent priorities. Only after management has assessed and selected an option can this option be specified more precisely in order to design an application (see also Figure 1).

This methodology aims at contributing to practice as well as to theory. Practitioners, such as (e-business) managers and (e-business) consultants, can use the methodology to identify and order e-business options in a systematic rather than an intuitive, imitating or precedent-based way. This methodology can also be used to challenge certain e-business strategies or to consider unconventional alternatives.

The contribution to theory is based on the fact that many existing e-business frameworks are directed at the assessment of certain e-business alternatives, but that general approaches addressing the identification of e-

business options from scratch, are still scarce. This argument will be explained in the next section.

BACKGROUND

Although Chung-Shing Lee's contribution (2001) of providing a framework to evaluate e-commerce business models is useful, evaluation can only take place after the identification of options, which is the focus of this article.

Barua, Konana, Whinston, and Yin, (2001) introduce an e-business value model that supports management in determining where to deploy organizational resources by highlighting specific areas of opportunity. Barua et al. also emphasize that organizations should not merely concentrate on the existing products or services. They suggest that the Internet may open up opportunities to reach new customers and to introduce new products or services.

The ideas of Barua are in line with those of Ansoff (1965), who identifies product market areas to be focused on by organizations. Ansoff suggests that two important strategic questions of organizations are: (1) whether they should focus only on their existing markets and customers or also on new markets and customers, and (2) whether they should merely focus on existing products and services or also on the development of new ones. With respect to e-business these two fundamental questions are highly relevant, since the Internet makes many organizations rethink their product-market combinations fundamentally. Therefore, these two questions are addressed in the approach as described in this article.

Straub and Klein (2001) build on these ideas by stating that e-commerce can produce three categories of effects: first-order, second-order, and third-order effects. First-order effects involve reducing costs and increasing productivity. Second-order effects concern the pursuit of new markets and improving services, and third order effects lead to far-reaching transformations affecting goods and services, ways of targeting as well as distribution (Andal, Cartwright, & Yip, 2003). These issues are also addressed in the methodology as described in this article; they will be identified explicitly.

We can conclude that there are already a considerable number of models that can be used to assess and evaluate current e-business applications and measure their readiness for the future. However, there seems to be a lack of approaches that can help analysts generate options and future directions regarding utilizing the Internet. The approach as described in this article aims at making suggestions with respect to how such a methodology could take form.

METHODOLOGY

Dimensions and Elements

Organizations can use the Internet as a means of communication with the outside world in different ways. These different ways can be analyzed by distinguishing among the following dimensions: stakeholders groups, stakeholders' statuses, channel strategies, communication modes, product/service groups and product/service statuses.

These dimensions are derived from the elementary notion that organizations can be perceived as open systems. In order to survive, good relations have to be established with parties in the outside world. For that reason, organizations exchange information to relevant parties in that outside world. These communications may lead to transactions. See Figure 2.

In order to generate potential e-business options, it has to be identified with which parties in the outside world the organization intends to exchange information. These can be current or new parties, since electronic networks can also be used to extend the reach of organizations. When this outside world has been identified, the way of using electronic networks has to be considered. Here we can identify communication modes, channel strategies and (current or new) products and services. These dimensions are further explained in the next paragraph.

Dimension #1: (External) Stakeholders Groups

Organizations exchange information and communicate with all external stakeholders, who can be divided in *business partners* and *other stakeholders*. It is relevant

Figure 2. Organization as an open system
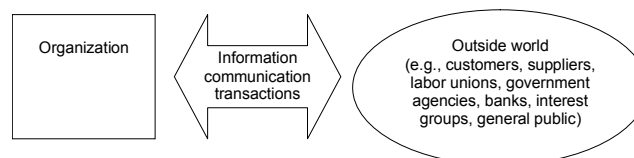
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