Economy

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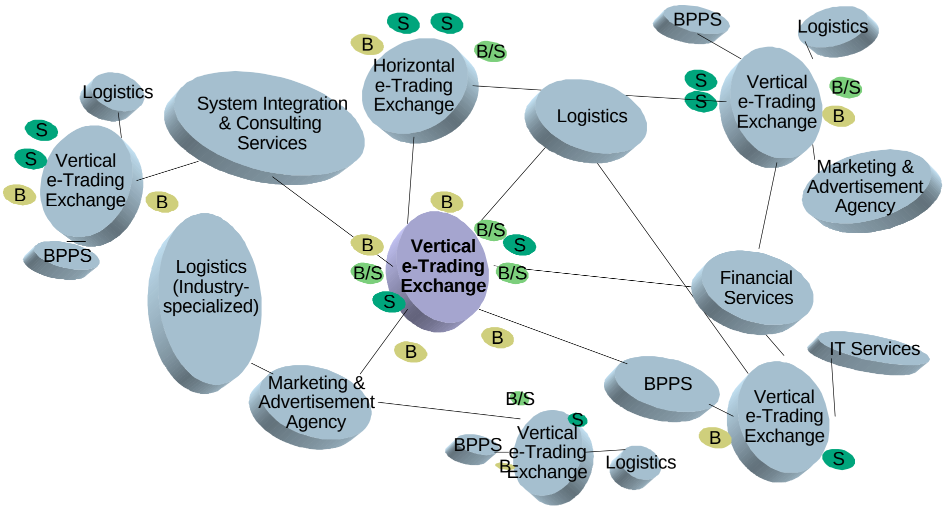
Strategic Design of B2B e-Marketplace Business Models

Diploma Thesis

Examicus

Strategic Design of B2B e-Marketplace Business Models

10 Strategic Design Considerations



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Preface

B2B Commerce enthusiasm is big – even despite the recent e-marketplace shake-out.

Internet Technology and its technical details involved in creating an e-marketplace is complex, important, and interesting, so that it was easy for many dot-coms to get lost in them. But when it comes to its base, e-business is not about bytes, but still about pure business, as the recent market development has shown.

Obviously, the market will now look more cautiously at the business model content and demands sustainable e-marketplace business model, which has been a basic reason for me to create a practical framework for the design of B2B e-marketplace models.

Breeding ground for my own e-business enthusiasm was certainly my internship at IBM Unternehmensberatung GmbH and further works within the IBM Consulting Group, where I had the chance to gain deeper insight in the creation of e-marketplaces.

During the creation of this report, I have truly been experiencing a lot of cooperative support, interesting discussions, as well as many helpful suggestions, and I would like to acknowledge the contributions of all who participated.

Especially, I wish to express my deep thanks to Martin Koppenborg, Vice President Strategic Accounts at emaro.com, an e-marketplace start-up, Frank Schmidt, Market Analyst at IBM's e-business services, and to Dr. Alexander Hirschbold, Consultant at Mercer Management Consulting, who each played a critical role in the building process.

Last but never least, I would like to thank Maximiliano for his steady and loving support during this effort.

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Table of Contents

I. List of Abbreviations

ASP	Application Service Provider
API	Application Programming Interfaces
AVL	Approved Vendor List
ASP	Application Service Provider
B2B	Business-to-Business
B2C	Business-to-Consumer
BAMs	Bricks-and Mortar Companies
Build-to-order	Buyers reserve manufacturing capacity; first order, then manufacturing
EDI	Electronic Data Interchange
EDIFACT	Electronic Data Interchange for Administration, Commerce and Transport
eMP	Electronic Marketplace
IPO	Initial Public Offering
IT	Information Technology
Mgmt	Management
Mgr	Manager
MRO	Maintenance, Repair, and Operations
RFI	Request for Information
RFP	Request for Pricing
RFQ	Request for Quotation
SCM	Supply Chain Management
SKU	Stock-keeping Units
VAN	Value-Added Network
VPA	Volume Purchase Agreements
URL	Web Site Address
XML	Extensible Markup Language

II. List of Tables

III. List of Figures

Executive Summary

Due to the enormous analyst projections on worldwide B2B e-commerce, and additionally forced by the low barriers to entry, races to implement e-marketplaces have started since everyone was keen to get a share out of this large opportunity.

However, as the recent e-marketplace shake-out demonstrated, many e-market makers have often concentrated on Internet Technology, forgetting that once it comes down to its base, e-business it not about bytes, but still about pure business. Often, the first-movers business models grounded on great ideas, but were not sustainable.

e-Marketplaces base on complex business models that present key strategic issues which must be addressed prior to the creation and implementation of any technology infrastructure.

With the help of the 10 Strategic Design Considerations Guideline for the creation of a B2B e-marketplace business model, the reader –firms that are considering becoming e-market makers, and firms interested in participating in an e-marketplace as buyer, seller or service provider- should be able to formulate a complete e-market strategy for an e-marketplace initiative.

The 10 key strategic steps to consider on the way to create the Business Model Design are as follows:

1. Market and Stakeholder Analysis
   Which are the quantitative and qualitative attributes of the market: market segmentation, fragmentation of the sell-and buy-side, existing and competing industry channels, complexity of product/ process?
   Who are the buyers and sellers, service providers, transaction influencers and competing marketplaces?
   Who are the key stakeholders that are needed to gain critical mass for the marketplace?

2. e-Marketplace Models
   What forms of eMarketplaces do exist?
   Which trend of model can be identified?
   Should the e-marketplace be proprietary or open?
   Which roles does an e-marketplace take?

3. Value Proposition
   What does the marketplace offer the key players?
   How will this value proposition gain differentiation in the market?
   What value proposition will attract and retain those players?
   How will this value proposition evolve over time?

4. Key Parameters & Value-Added Services
   Which technology capabilities and key functions are required to fulfill the offering and maintain the market?

5. Functional Architecture Model
   How does the logical construct of the functional requirements look like?
   What is actually behind the platform?

6. Pricing Mechanism
   How is price determined for items being bought and sold?
   What different pricing mechanisms exist?

7. Revenue Model
   How does the e-marketplace owner capture value from his business?
   Where do the revenue streams from successful e-marketplaces derive from?

8. Equity Structure
   What are possible ways of sharing out the equity?

9. Strategic Roadmap
   How is the plan of the roadmap for the evolution of the e-marketplace, including key partnerships and alliances?
   Which is the reaction plan in case of emerging competition?

10. Business Plan
   How sustainable is the business model?
   What are the anticipated reactions from competitors and other major players in the market? Who will likely react positively or negatively and why?
   What are the economic implications of the business model for the market makers and key stakeholders?
   Presentation of the Business Case.

By addressing those 10 steps, the e-marketplace management will be well positioned to capture optimum market opportunity and sustain the market position as competitive pressures emerge, due to a well-built strategic roadmap.

Meanwhile creating the B2B e-marketplace business model guided by the Strategic Design Considerations, the e-marketplace designer should take into consideration a number of tactical obstacles that must be overcome and the key success factors as listed in the report that will help to position the e-marketplace on the winners' side. The added checklist for the Business Model results as a very useful instrument. In addition, the e-market designer has to bear in mind industry-specific requirements since obviously not every e-Marketplace Business Model goes along with the respective industry.

A solid strategic design is critical to attracting members, to create interest and achieve momentum that will encourage others to join an e-marketplace. As only a few e-marketplaces are expected to survive in each industry, those design choices that are made to address industry problems or to otherwise create a high value-add as well as their excellent execution will make or break an e-marketplace.

As the author stresses throughout the report, what matters isn't just selling products via the Web site or offering a transaction platform for order matching. A model that will succeed will utilize the e-marketplace platform as a mechanism to provide higher levels of integration and solutions that make industry processes become more efficient. Those collaborations give the exchange more relevant context, community attributes, and value and constitute the "stickiness" for B2B sites as opposed to convenient dating services or simple order matching tools which exchanges that lack these collaborations will end up running.

From today's point of view, most probably only a few Business Models will survive the B2B Internet battle. For the majority of the B2B market, the following business models will prove to be successful:

Few **vertical e-trading exchanges** will form the main players in the B2B market, because their participants will integrate their systems with the aim to establish one strategic interface and have access to other key services through the e-market's connection to third-party marketplaces.

Horizontal e-marketplaces are starting to face an expanded shake-out. Only the fittest will survive, presenting a broad offer and execute efficiently.

Industry leaders will partner specialized **business services** are for example financial settlement, fulfillment and delivery services offered by logistic e-marketplaces, and Business Intelligence services. This enables enterprises to outsource some services and reduces cost.

Some e-marketplaces with special know-how or expertise that position themselves intelligently, providing value-adds which would imply inconvenience for the big players to set up, will be on the winner's side. Those **niche players** can successfully partner with verticals, covering the weak spots of the latter on highly specialized products or services.

The consolidation of the e-marketplaces will go on, since fewer, larger e-marketplaces will be required to realize significant value.

Due to the limited offerings by the running e-marketplaces to date, as well as the uncertainty at the current development stage to rely on one single e-marketplace, companies join multiple
e-marketplaces to trade in multiple private and publics, verticals and horizontals in order to satisfy their needs for different products and services. However, this constellation named e-Trading Network is rather transitive and will eventually evolve into a more solid and effective model of inter-market integration: the e-Trading Communities. e-Marketplaces will build integration gateways among themselves and partner with verticals, horizontal and value-added e-Marketplaces, so that companies can rely on a single connection; this way, the players will benefit from the broader partnering community available through this network of e-marketplaces. This way, the e-marketplace becomes a strategic partner for the individual business.

1. Introduction

Over the last few decades, businesses have invested billions of dollars on information technology (IT), including software, hardware and networking equipment, and telecom infrastructure. They have focuses primarily on automating internal processes such as accounting, payroll, finance, human resources, and manufacturing. The 1990s have seen the proliferation and hypergrowth of the Internet and Internet technologies, which together are creating a global, cost-effective platform for businesses to leverage past IT investments and fundamentally reengineer the way in which they do business and interact with customers, suppliers, partners, and third-parties. Additionally, this is enabling smaller businesses to gain the efficiencies and cost savings that once were afforded only by larger businesses. During the year 2000, B2B Commerce was the main catalyst towards a new kind of computing, and a new kind of Internet.(Mason L.: The Rise of eMarketplaces) A new technology infrastructure, which is called the Grid, will emerge to supersede the Web and to form the base of the new e-conomy.(Deutsche Bank: The Grid)

However, the unique, real-time, many-to-many connectivity afforded up to now by the Internet enables buyers to link up with customers, suppliers and other members of their value chain in e-marketplaces to electronically exchange information and procure products and services. This concept of business-to-business e-commerce is not entirely new: Large corporations have utilized EDI software and private communications networks to trade with their suppliers electronically for over a decade. Nevertheless, EDI has never achieved critical mass due to its proprietary nature, lack of flexibility, and significant investment requirements.
That high cost of EDI acquisition and maintenance prevented many smaller businesses from entering the e-marketplace, reducing its liquidity and bringing value to companies that implemented this private network. The proliferation of the Internet and Internet technologies, such as the Web browser and XML, has led to a relatively inexpensive electronic communication channel that makes economic sense even for small and low-volume businesses. The Internet and Internet Technologies certainly provide the opportunity to greatly extend the benefits of EDI to shorter cycle times and increased efficiencies to the masses. (Mason L.: The Rise of eMarketplaces)

As a result, Internet-based e-marketplaces have become a feasible way to sell and buy in many industries.

The rapid growth and trillion-plus dollar forecast for business-to-business (B2B) e-commerce has shifted attention from consumer-oriented Internet business models (B2C) to those in the business-to-business sector. Forrester Research expects e-marketplace trade to overtake bilateral trade in 2004 with a Commerce Average Growth Rate (CAGR) of 125.6%. According to Forrester, worldwide B2B e-commerce will hit $6.8 trillion in 2004. (Forrester Research, Inc., “Global eCommerce Approaches Hypergrowth”)
Unlike the B2C arena, large incumbent companies from the “old” economy hold strategic control over B2B models because of their large volume of business transactions. We have seen companies such as GM, Ford, and DaimlerChrysler join forces to form a $500 billion electronic marketplace consortium with their suppliers, named Covisint. Fifty food and beverage makers, including Kraft Foods, Proctor and Gamble, Coca-Cola, General Mills, Nestlé and Unilever announced a single industry-

wide e-marketplace for conducting a portion of their $200 billion purchases of goods and services. Sears, Carrefour, Chevron, and Sabre are other examples. Even in situations where a new entrant launches an industry e-marketplace, it views the existing industry incumbents as potential partners instead of competitors. e-STEEL, a startup B2B steel exchange has signed up U.S. Steel as one of its sellers as well as an equity stakeholder. These examples of the increasing importance of Internet Technologies for business highlight the need for companies to develop a B2B e-commerce strategy that includes consideration of creating or joining an e-marketplace.

Electronic marketplaces will play a significant role in B2B e-commerce if they are designed to add value rather than just take advantage of market inefficiencies. Dataquest, for instance, expects e-marketplaces take a 20% slice of the B2B e-commerce pie by 2004. Forrester is more optimistic, with a prediction of 45% to 74%, depending on industry, by 2004.

B2B eMarketplaces certainly have a large impact on business. Moving business commerce online can make significant progress toward solving key problems most companies contend with:
The Internet overcomes one of the vexing limitations to market transparency: geography. Commerce is fragmented by geography, which creates inefficient markets and uninformed buyers and sellers. Eliminating geography and market fragmentation as a barrier to commerce is the key catalyst for efficient markets. Efficient markets really mean transparency. Transparency is a knowledge-based concept that implies participants have intelligence about the markets around them. Having nearly perfect transparency over price, availability, supplier and product can substantially change the behavior of the buyer and hence the consequences for the supplier. (Morgan Stanley Dean Witter)
A second major business problem being attacked by electronic marketplaces is the inefficiency of business processes. Most interactions between businesses are complex as well as labor- and information-intensive. Businesses fund enormous inefficiencies because they tackle complex, collaborative processes manually. Channeling inter-company processes and information through a common medium can create unprecedented levels of efficiency and process transparency.
Supply chains are bloated with excess inventory because of an inability to see and plan for the right mixes and volume of products. Participants would like to substitute information for inventory and build-to-order. As a third large benefit, Internet-based supply chains will have an ability to share information quickly and adjust to market conditions more easily.

Thus, the deployment of e-marketplaces is enabling a more efficient and frictionless flow of information, goods, payments, and other services between businesses. Like other commercial exchanges throughout history, Internet-based exchanges enhance transparency through efficient markets, address inefficiencies in B2B supply chains, improve business processes and lower transaction costs by aggregating buyers and sellers in one single medium. This way, these e-commerce enablers are in position to provide a compelling value proposition to business customers as well as to the market makers themselves and their shareholders.

B2B enthusiasm is big – despite recent movements on the Internet field as for example the closure of Chemdex, a life science e-marketplace regarded as a pioneer in his industry. Certainly, the exciting potential of eCommerce has to be balanced against the reality of a long road ahead. And despite the large market opportunity, not every business model will work as we realize by the first shake-outs on the market.

At their base level these e-marketplaces offer a combination of marketplace formats to facilitate transactions, multi-vendor catalog, bid/quote exchange, and auctions.
However, in order to survive the shake-out in e-commerce, e-marketplaces will have to provide greater value-add than just a transaction platform, as low barriers to entry are likely to drive transaction-only e-marketplaces and corresponding transaction fees to kindergarten status at Internet speeds.
Because e-marketplaces are complex trading arenas. To be successful in an age of inexpensive communications, where suppliers can directly reach a large number of customers (and vice versa) without the need for "middlemen," e-marketplaces must be designed to deliver value to all players required in order to attract and retain multiple stakeholders. Their goals, objectives, and problems should drive the design and execution of the e-marketplaces. e-Market designers contemplating creating business-to-business e-marketplaces must consider multiple strategic design issues and options prior to the technical implementation.
Understanding how some existing e-marketplaces that have been successful in capturing significant value within an industry can give added perspective on e-marketplace strategy and design.

This report is not intended to provide the reader with a complete e-marketplace strategy. Rather, the objective is to help the reader –firms that are considering becoming e-market makers, and firms interested in participating in an e-marketplace as buyer, seller or service provider- frame the issues and relevant options around a potential e-marketplace initiative. As a result, the reader will better understand the particular critical business issues and assumptions in the e-marketplace business strategy that must be rationalized prior to executing an e-marketplace initiative. To sum it up, this report will provide the basis for pursuing the formulation of a complete e-market strategy.

After the definition of the most important e-conomy expressions, which a standard for hasn't yet been set for yet, the report is comprised of the following components:

The focus of the report lies on the larger and most significant part of the 10 Strategic Design Considerations for the Creation of a B2B e-Marketplace Business Model, chapter 3.
This model for the creation of a Business Model aims to guide the e-marketplace designer through the creation of the significant design points as the market and stakeholder analysis, the e-marketplace model, the value proposition for buy-side, sell-side, as well as for the exchange/ investors. The following step consists of the decision of the key parameters for the e-marketplace. With the results of those past steps, the eMP Functional Architecture Model is built which actually represents the final package. The pricing mechanisms present a pre-decision for the creation of the Revenue Model. The Equity Structure surely has a significant strategic influence. The

strategic roadmap gives insight into the future development of the Business Model. In order to receive capital and to establish a certain liquidity on the e-marketplace, the founders, partners, and of course the investors require a sustainable Business Case which justifies the business initiative.

The lessons of existing e-marketplaces provide a helpful list of challenges in the B2B e-conomy. From the background of recent shake-outs, the author decided to prepare the e-market designer, by focusing in chapter 5 on vertical e-trading network initiatives and considering some industry-specific requirements for e-marketplaces. Certainly, the list of industries is not complete; nonetheless, it serves to give an overview of various requirement and makes the e-marketplace designer aware of possible specifications in his industry.

Throughout the report the reader will find references to the actual e-commerce world, i.e. names of operating e-marketplaces, technology providers, or certain third-party service provider. Furthermore, the practical relevance of this theoretical framework is underlined by the example of a quite sustainable, from the author’s point of view, business model of an e-marketplace for the electronics industry: e2open.com. Based on the 10 Strategic Design Considerations, a reconstruction of the e2open.com possible Business Model is realized.

Following on from this, chapter 7 presents the essential success factors for an e-marketplace business model. The checklist in chapter 8 is a very useful instrument in order to put the finishing touches to the Business Model.

The reader should note that some topics that will not be addressed by this report include taxation, antitrust and further legal issues. Recently, too many changes have been taking place at Internet speed, so by the time this report is read, the information would be out of date. For this reason, it is recommended that the reader obtains up-to-date on those issues from the many sources on e-commerce via the Internet just prior to strategy design.

Whoever expects this report to represent a purely theoretical reflection on e-marketplaces should rather end here, otherwise the reader will certainly be disappointed. For potential market makers, bricks-and-mortar companies evaluating whether to establish a private marketplace or join an established one, agile buyers or sellers searching for a qualitative e-marketplace interface, as well as established market makers searching for advanced development strategy points, however, a practical framework for the successful creation of a B2B e-marketplace model is in store.